THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888

No. 45. NOVEMBER 8, 1952 VOL. 64.

SEVENTIETH ANNUAL CONGRESS OF THE BRITISH VETERINARY ASSOCIATION HARROGATE, September 7th to 13th, 1952

Presidential Address*

BY

ALAN J. WRIGHT, M.R.C.V.S.,
MACCLESFIELD

Ladies and Gentlemen,

I rise to address you on what is by tradition a privileged occasion. At this late stage in his career your President has been accustomed to speak to you frankly. I have given deep thought to what I would say to you to-day, and have decided that I must put publicly before you my own personal observations, views and feelings on the present position and relationship which exists between the Association and its members, and then to try to review and comment upon the achievements and trends of the B.V.A. during the last 15 years or so. I do this latter because I think it is both salutary and encouraging in a great and progressive profession, such as ours, to pause from time to time and take encouragement and instruction from what has already been accomplished before pressing on to new endeavours.

For some considerable time now I and many others have been disturbed and worried at the apathy towards the Association that exists amongst so many members of the profession ; the lack of appreciation and the ignorance of its work, its aims and achievements, and the failure of so many to realise or even care what an important and vital part the B.V.A. plays in the life of the profession and the country as a whole. Many of you may well ask, why should members, if they do not wish, really be interested or care about such things, so long as they pay their annual subscription and receive the *Record* and any other publications that are produced? I maintain that there are many very essential and good reasons why every member of the profession must take an active and live interest in the affairs of the parent body.

During the last few years more and more emphasis has been placed on preventive medicine and disease control ; public funds are being used more and more for these measures, and the State is utilising and paying the profession to carry out these programmes, *e.g.*, the Attested Herds Scheme, vaccination schemes and duties which are carried out under the Diseases of Animals Act.

The discussions, negotiations and agreement on such measures must necessarily take place between the Government and some central body or bodies acting for the profession as a whole, and thus it is the B.V.A. and the R.C.V.S. which are required to carry out these duties.

Again, because of the ever-growing and closer relationships and necessary liaison between our profession and other influential bodies, such as the National Farmers' Union, the British Medical Association, the Pharmaceutical Society, the animal welfare societies and the Animal Health Trust, the duties and responsibilities of our two professional bodies continue to increase and become more important every year.

Thus, it is obvious that the R.C.V.S. and the B.V.A. are the governing bodies or parliaments of our profession to-day ; every individual member on the Register is affected by their actions and decisions, and as the electorate of these organisations, it is your bounden duty to be actively interested. As you are aware, the R.C.V.S. deals mainly with the ethical and educational matters, whilst our parent body is concerned with the domestic and political affairs, and naturally it is with the latter that I intend to deal to-day.

Our Association is a democratic organisation, similar in its set-up and constitution to our British Parliament. You, its members, are the electorate who through your Divisions or constituencies, elect the members to Council, who are in effect your M.P.s, the Council and Committees being the parliament and the body who formulate and direct policy, the officers and the General Purposes and Finance Committee acting, as it were, in the capacity of the Cabinet.

It follows therefore that as in our national system, the undertakings and obligations of your parliament are great ; wise and considered decisions and recommendations are necessary, and have to be made. Thus it is essential that in that Council there must be a number of wise and experienced councillors, members who possess the knowledge and background of the many complex problems and negotiations facing the Association, and affecting every member of the profession ; many of these problems and negotiations are of some years' standing, and for their satisfactory solution or direction it is absolutely necessary that we should have the services of members who have been involved in these problems and negotiations, and who know their full history, implications and difficulties. In our present set-up this very real need is supplied by the past-presidents and senior members of Council, and it is my firm opinion that if the services of these experienced men were denied the Council, it would be a very disastrous and retrograde step. It is, however, very true that young and new blood and ideas must be continually infused into the governing body, and I am confident that this is always being achieved, and I can assure you all that no one is more keen and anxious than I am to see that this infusion of young, vigorous members continues and increases. I therefore implore those of you who at present are agitating for the complete removal of all past-presidents as *ex officio* members from your Council seriously to consider and reflect on the implications and results of such a move. Many of us fully realise the good motives behind this agitation—that is, to allow and encourage the younger members with new and live ideas into your parliament—but as I said at the last annual general meeting, I am certain it will have the opposite effect, inasmuch as many past-presidents who are keenly interested in the Association's affairs and their profession would seek re-election, thus filling a Divisional vacancy that otherwise would have been occupied by a new and young member.

It must be obvious, therefore, that because the Association plays such a major rôle in determining the policy and course of the profession every member should possess and exercise a vote in the election of his or her parliament, but I regret to say that this state of affairs does not appertain

* Presented to the Annual General Meeting, September 10th, 1952.

to-day. Firstly, there are over 1,800 members of the B.V.A. who are defranchised because they are not members of any Division, and in this connection I should like to point out that members on the Supplementary Veterinary Register who are denied membership of a Division are thus deprived of their right to vote. Secondly, there are over 500 members of Divisions who are not members of the Association and who obtain many of the benefits gained by the efforts of the parent body, yet contribute little to it. I maintain that this state of affairs needs remedying at once.

Now, having outlined the general constitution and framework of your Association, how can the fears and worries that I expressed at the beginning of my address be rectified or removed? My view is that each section or department that goes to make up the Association can do much to improve the position.

At the summit of our structure, the officers and the General Purposes and Finance Committee, *i.e.*, the cabinet, should see that the editorial and liaison staff, through the medium of the journals, give more publicity and details to the profession of the achievements gained, the work and negotiations that are always going on, and the service that is being continually rendered to the profession as a whole, and to individual members, thus giving each elector a more intimate insight and interest in the affairs of the parent body. I am certain that at present the mere publication of Council proceedings in the "Supplement" does in no way give the vast majority of the profession an opportunity to understand or realise the terrific amount of complex and responsible work this Association is carrying out on their behalf. It is essential, in my humble opinion, that greater opportunity in this way should be given to members, so that they are able to obtain information that will enable them to grasp and appreciate the work, aims and objects of their government.

Descending from the summit, we come to the parliamentary body itself, consisting of the Council and Committees, composed of elected Council members, or M.P.s. This section of the Association's structure is of course very important, and upon it rests great responsibilities and many burdens. First, it is the bounden duty of all elected representatives to give of their best, to do their utmost to attend as many meetings as possible, and to take an active interest and part in the affairs of the Council and Committees. It is through the medium of these members that the views, opinions and fears of their electors are conveyed to the Council for consideration and judgment. Often it is impossible for them to state their Division's views on matters that require quick and urgent consideration, but they must then express their own considered views and vote conscientiously. The very life, vitality and success of your parliament depends on the virility and active participation of its members in all the affairs of the Council and Committees.

Besides having duties and functions to perform in Council, these elected members have also other important obligations to their own Divisions and other members of the profession, and that is to do their utmost to broadcast and explain this vital work that is being done on their behalf; they should, more than in the past, speak to, explain and outline the background of this work, and through their own knowledge and experience gained in Council and Committees, help their colleagues to arrive at wise decisions. How often have important decisions, or the results of long and arduous discussions and negotiations, simply been announced and passed by at Divisional meetings, leaving the majority of the listeners often puzzled or ignorant of the far-reaching importance of these things.

Coming down one stage nearer to the foundations of the set-up of our parent body are the Divisions or the constituencies, which are the very backbone of the whole structure, and on which fall many responsibilities, which I fear in the past have not always been fully realised or undertaken.

First, on matters of major policy affecting the profession, it is from these constituencies that views and opinions are sought by the Council, and action is subsequently taken on the recommendation of the majority. This being so, I do strongly urge and implore Divisions to realise their importance and grave obligations in discussing, deliberating and making decisions on these issues. To-day, because, as I pointed out before, the State and other bodies pay us and we accept that payment, schemes and agreements on a national basis must necessarily come into being, and in formulating and passing judgment on these matters Divisions must seriously and minutely investigate and consider them, putting aside in many cases their own selfish or local objections, and deciding whether the proposals are in the best interests of the profession and the community as a whole, bearing in mind that these schemes and projects have only been suggested by their Council after very careful consideration and debate, and often after prolonged and difficult negotiations. Secondly, it is through the Divisions that matters for investigation, requests for action and information generally are brought before the parent body; and thirdly, it is by their numerical strength that the number of delegates to Council is determined.

Realising these Divisional functions and the tremendous increase in the last few years of the amount and scope of work that has to be dealt with from headquarters, I am confident that more time must be devoted to the governing and political matters at Divisional meetings. Please let me emphasise at once that I am in no way suggesting that the time given to scientific subjects and discussions should be decreased at all, but that extra time must be given, either by the holding of extra meetings or having whole-day meetings instead of half-day ones, to discuss fully and thoroughly understand the political matters on hand. If the B.V.A. is to continue to play such a large part in governing and protecting the profession and deciding on its policy as it does to-day and as it will do increasingly in the future, it must have the confidence and support of all its members; this can only be obtained by the Divisions giving their members full opportunities to know and discuss its workings and functions.

I therefore make a strong plea, ladies and gentlemen, that serious consideration be given to this suggestion that extra time be given to this section of the Divisions' work and duties.

Until recently, the majority of the matters sent by headquarters has been hidden on the agenda of the meetings under the single heading "correspondence." We have now recommended that this heading be itemised fully, so that all members have the opportunity to be fully aware of all the important subjects that will be discussed. So often in the past have members bitterly complained that the Association has not adhered to its rule of consulting Divisions on matters of policy, that there has been no opportunity for them to express their views, and that Council has made a *fait accompli*, when in fact this is not so, but the matter has been sent to Divisions and simply appeared on the agenda under the heading "correspondence."

Another very great responsibility which falls on the Divisions is the election of their representatives to Council or their M.P.s. Every effort should be made to elect members of the highest calibre and quality, members who are not only willing and able to give up a considerable amount of time, but who the Division is certain will serve, and taken an active and valuable part in the work of the B.V.A. The election of your representatives is a very serious and real duty to yourselves and your profession; it is of paramount importance, and should not, as so often has happened in the past, be an item

that is dealt with at the end of a meeting and rushed through when only a few members remain.

I have now dealt with the superstructure of the set-up of our Association, and the duties and responsibilities falling on each section; the only remaining portion now to be considered is probably the most important—that is, the very foundation, comprising each individual member, or the electorate. It is on the strength and solidity of the foundations that depends the life and strength of the building; every constituent brick and part must be sound and able to take its full and fair share of the weight. Thus every member of the Association, and actually the profession, must play his or her part, accepting and carrying out the tasks placed upon them individually, some acting as cornerstones and fulfilling greater tasks than others.

What are the responsibilities and obligations that each member of the profession is called upon to shoulder in these matters?

I maintain every one should be a member of the B.V.A. They should avail themselves of the right to vote by being members of a Division. They should do their utmost to acquaint themselves with the aims and activities of the parent body, and be vitally interested—much of that knowledge can be gained by taking an active part in the life of the Divisions, and attending the meetings whenever possible. Whilst fully realising the difficulties encountered by many members, I am certain much greater attendance could be achieved by many making that little extra effort.

Here I would like to put forward a plea on behalf of the younger people, particularly assistants, and that is to ask employers to allow them whenever possible to attend some of these Divisional meetings, and also to acquaint and discuss with them freely the affairs and deliberations of the Divisional and Council meetings, thus creating a greater interest amongst them, and a feeling that they are an integral and necessary part of the profession and Association.

Finally, and above all, every individual in the profession must always remember that he or she is a member of an honourable and noble profession, realising fully the oath taken and their duty to their profession and the community as a whole. It is essential that everyone should play the game to the utmost of their ability, always conscientiously carrying out and honouring conditions or agreements that have been laid down by their governing bodies, putting aside any personal or selfish motives. Being a numerically small profession, to a very large extent it is judged, appraised or criticised by the actions and life of the individual member. It is perfectly true to state that every single member is a public relations officer of the profession; thus, how important it is that each one of us should constantly conduct ourselves in the best interests of the profession and its two governing bodies! I know the majority of you could not possibly be aware of the amount of work, the many problems and difficulties that the B.V.A. has to deal with as the direct result of its own members often not accepting or fulfilling their obligations. Thus, if every section of the structure of our parent body shoulders and carries out faithfully and to the full the responsibilities and duties placed upon it, then the B.V.A. will serve its members, the profession and the community more ably and efficiently, and the profession as a whole will continue to grow in stature and honour, and play its full and proper part in the life of the country.

Earlier in my speech, ladies and gentlemen, I spoke of the importance of making the work of the Association better known, not only to members of the B.V.A., but to all members of our profession and the public, and having suggested this, the least I can do is to give you a lead myself and try to paint a brief picture of a portion of what has been done and is being done.

Of first importance has been the promotion of schemes to increase the contribution of the profession to the community. In this connection one immediately realises that it was the Association who was responsible for the drafting and application of the Control Scheme for implementing the recommendations in the Report on Diseases of Farm Livestock, and associated with this scheme was the provision of refresher tuition in bovine pregnancy, and the diagnosis and treatment of infertility.

Over a period of years the B.V.A., particularly the Organising Committee, has been closely occupied in the relationship between our profession and the animal welfare societies, and has been doing its utmost in bringing about agreements with these societies for the proper qualified treatment of the sick animals of the poor. Other schemes which we have sponsored or have been intimately concerned with include the Accurate Data Scheme, refresher courses in poultry husbandry and disease control—at veterinary colleges and institutions, and with practitioners—whilst such matters as stray cats and dogs and guide dogs of the blind have been satisfactorily dealt with. Constant representations have been made to Government departments, mainly to the Ministries of Agriculture, Health and Food, in trying to implement the Association's policies and principles in the control of meat and milk production, and livestock in lairages. Many of our representations have not yet been accepted, but I can assure you that no effort is being spared in continuing to press for them. I know I shall have your unanimous agreement that the control of meat inspection must be under the veterinary profession. We are the only people properly qualified to deal with this matter of great public concern. Certain successes have emerged as the result of our efforts; the excellent memorandum subscribed to the Ministries certainly had considerable bearing on the decision to transfer the responsibility for clean milk production from the local authorities to the Ministry of Agriculture. Again, during the early years of the war, veterinary officers were seconded to the Ministry of Food as area technical advisers on meat inspection—a clear ministerial agreement that this was the function of our profession.

In 1948 we gave close consideration to the Ministry's draft regulations for the control of artificial insemination of cattle, and important amendments were sent forward by us. We prepared also a detailed recommendation on the subject of reducing the incidence of tuberculosis among cattle, and this was the basis of discussion between the Ministry, the N.F.U. and ourselves. We discussed at length the Attested Herds Scheme with the Ministry, and this was later introduced. Of immediate importance to a number of members of our profession has been the long and persistent effort, which is still in progress, to improve the status and salary of the staff of the Animal Health Division. In a similar content we drew up a far-reaching memorandum on the future development of the Colonial Veterinary Service, and after our approach ot the Colonial Office, salaries and conditions of employment were improved in certain Colonies and the Secretary of State agreed to the employment of full-time advisers on Animal Health, whilst of a more domestic nature has been the improvement of the arrangements for the working of the Calfhood Vaccination Scheme.

At an earlier stage I mentioned to you the many ways in which the activities of our profession impinge upon the lives of the general public and why, for that reason, your Association is drawn more and more into consultation with Government and other departments. I have not time now to give you any adequate idea of the numbers of memoranda or of the vast amount of evidence prepared and given to various committees concerned with such diverse subjects as the export and slaughter of horses, poultry and hill sheep farming,

agricultural marketing Acts, condition and sale at markets, water supplies and sewage facilities in relation to agriculture, cruelty to wild animals, import and export of cattle semen, and a great range of other matters.

Recommendations were made to bring the Animals (Anaesthetics) Act, 1919, more into accord with modern veterinary science, and as a result an amending Order dealing with dehorning was introduced, and you will be pleased to hear, I am sure, that we have set up a committee to deal with this subject, to prepare a draft of a new Act and to find ways and means of getting it through Parliament.

I have said enough, I am sure, to convince you that our contact with parliamentary circles, together with the advice we give and the representations we make to various Ministries, are of vital importance to the profession. By our representation on the Parliamentary and Scientific Committee and through our parliamentary agent we are constantly informed of subjects affecting the veterinary profession which are being or may be discussed in official circles. I will venture to say that in this regard nothing of importance is allowed to pass by, and we are speedy in taking action whenever it is called for.

I shall not take up much more of your time in describing what the Association is doing for you and in emphasising once again how necessary it is for every veterinary surgeon to belong to it, but I always feel that if one is blowing a trumpet one may as well give a resounding blast whilst one is about it, so I will ask you to bear with me just a moment or two longer while I comment upon one or two other aspects of our work.

You all know that our parent body is responsible for the publication and distribution of our weekly journal *The Veterinary Record* which plays such an important rôle in our professional life, but what I think many of you may not know, is the vast amount of work and time put into this publication, not only by the salaried staff, but by the voluntary work of the Editorial Committee and other members of the profession in sub-editing, scrutinising, abstracting and reviewing. We owe a substantial debt to those who are doing this work for us, and I hope my few words will help you to understand the magnitude of it.

In this connection also you will not fail to realise, I am sure, the great value to our profession of the many other publications which are constantly being issued or kept up to date. Many of them are in demand among veterinary students and the teachers in our colleges, who have referred many times over to the great service rendered by the B.V.A. in producing and publishing all this literature. I have referred to the Editorial Committee and I must mention, too, the Technical Development and Organising Committees who give so much time to these publications.

The mention of technical work leads me to dwell very briefly on the activities of committees that have given so much time and thought to technical and scientific subjects. Among those which immediately come to mind are the Advisory Committees on Parasitic Diseases, Biological Products, Pig Diseases, Tuberculin Tests, Artificial Insemination, and the Agricultural Programme Committee.

A practical offshoot of the technical work which has been done has been the agreement between the Royal College of Veterinary Surgeons, the British Medical Association, the Pharmaceutical Society, and ourselves, in arrangements for the control and distribution of certain biological and therapeutic agents. We are pleased and proud to have such valuable and close liaison with such great organisations as the National Farmers' Union, British Medical Association, Pharmaceutical Society, Animal Health Trust, British Council and many other bodies whose activities and fields of work are so closely allied with those of the veterinary profession. Ancillary matters, to which I may just refer in this connection, have been the satisfactory results of our labours in regard to the supply of penicillin to veterinary surgeons, the standardisation of biological products, the purchase tax on drugs and medicines, the relationship of the profession to manufacturing chemists, and the collaboration with the Pharmaceutical Society in the compilation of a British Veterinary Codex.

Finally, to conclude this very incomplete review of the functions, activities and achievements of your Association, one must not forget the tremendous amount of work continually being carried out on behalf of the individual members. These services are diverse and multiple and vary from help and advice on individual problems to such excellent aid as that given in obtaining new cars.

Now, ladies and gentlemen, I have done—though all too inadequately, I am afraid—what I set out to do when I rose to my feet. I have urged you to support your parent body, and to take a close and continuous interest in its work, and I have tried to give you some idea both of the vast scope of that work and its practical importance to every one of you. How can I end my speech which, for most practical purposes also ends my tenure of office as your President? I can do no better than reiterate what are to me the articles of our professional faith—that we are members of an honourable body rendering an indispensable service to our fellow countrymen; that we are bound by our professional oath; that we must constantly conduct ourselves in the best interests of the profession and of its two governing bodies; and, finally, that in pursuance of the highest and noblest traditions of our calling we must set aside all thoughts of personal or sectional advantage and aim to direct ourselves soberly to the advancement in learning, in reputation, and in prestige, of that profession to which we are honoured to belong. (Loud applause.)

Graham Powell, 36, James Street, Harrogate.

MR. ALEX. THOMSON, M.R.C.V.S., Glasgow,
President-Elect, B.V.A., 1952-53.

CONGRESS ATTENDANCE LIST

We give below the recorded list of members, delegates and visitors who attended the 70th Annual General Meeting and Congress of the British Veterinary Association held in Harrogate from September 7th to 18th, 1952. The names of members who also were delegates are included in the section devoted to the latter.

MEMBERS

(Exclusive of Delegates)

Messrs. Alan J. Wright (President), A. J. Adams, T. H. Allen, J. A. Anderson, T. S. Anderson, A. H. Andrew, J. Andrew, G. Atkinson, B. G. Aylward, D. S. Barbour, J. Barr, E. P. Barrett, G. L. Beaumont, B. R. Bee, H. Begg, J. E. Birtwistle, N. McG. Black, J. H. Blanchard, M. Blunt, W. G. Blythman, Professor G. F. Boddie, Messrs. J. Bolton, E. C. Bovett, J. Bowett, A. L. Bragg, Miss W. M. Brancker, Messrs. A. C. L. Brown, J. Brown, J. A. Brown, W. Brown, W. M. Brownlie, J. W. Bruford, Mrs. K. M. Bull, Messrs. J. E. Burgess, J. C. Buxton, H. E. Bywater (Hon. Treasurer), A. Campbell, C. W. Cartwright, E. Clark, R. Clarke, E. Cotchin, G. H. Creyke, D. Crooks, P. Curtis, Miss M. Dalby, Mr. J. A. Dall, Dr. G. O. Davies, Messrs. A. C. Dixon, L. G. Donald, G. S. Donaldson, A. Donovan, J. K. D. Dow, J. Duffy, P. D. Dunn, G. Eaton, G. Edmondson, J. B. Edwards, R. H. Ewart, C. G. Farmer, P. Fernie, C. Field, J. Fitzsimmons, Miss C. M. Ford, Messrs. E. J. H. Ford, W. Forgrave, A. D. Forteath, Dr. A. C. Fraser, Messrs. A. Gibson, F. C. Gillard, Dr. A. W. Gledhill, Professor R. E. Glover, Mr. T. D. Glover, Dr. W. S. Gordon, Messrs. A. Gracie, A. M. Graham (Junior Vice-President ; President-Elect), A. Greig, R. B. Griffiths, T. W. Groves, C. A. Hall, C. W. Hallam, H. E. Harbour, E. F. Hardwick, J. B. Harmar, Mrs. M. L. Harris, Messrs. J. M. Harrison, W. T. Harrow, P. S. Hastie, R. H. Hawkins, H. F. Hebeler (Hon. Secretary), H. R. Hewetson, Colonel J. Hickman, Messrs. S. L. Hignett, R. W. Hillman, S. F. J. Hodgman (Senior Vice-President), H. Holroyd, D. M. Hood, M. A. Horrox, H. V. Hughes, T. W. Hughes, J. M. Ingram, P. L. Ingram, Dr. J. R. M. Innes, Mrs. E. K. Jackson, Messrs. O. F. Jackson, S. Jennings, R. Jobling, F. V. John, A. J. E. Johnston, K. D. Jones, W. O. Jones, Miss J. O. Joshua, Mrs. K. G. R. Kelly, Messrs. A. J. Kennedy, G. F. Kershaw, J. O. L. King, G. C. Knight, G. Lambie, W. Lang, J. S. J. Lauder, J. W. G. Leiper, D. A. Lemon, V. J. S. Leslie, R. W. Lewis, T. R. B. Lewis, G. Lloyd, R. W. Lloyd, E. Lowes, J. McIndoe, J. M. McKellar, W. R. McKinna, M. MacLean, J. McLintock, M. M. MacMillan, E. MacPherson, I. D. MacRae, A. Marr, W. S. Marshall, N. Mathieson, H. T. Matthews, W. C. M. Miller, Dr. F. C. Minett, Mr. D. Mitchell, Professor W. M. Mitchell, Dr. R. F. Montgomerie, Messrs. K. G. Morgan, S. J. Motton, D. B. Munro, O. Murch, C. T. Murphy, J. W. Nicholas, E. Nightingale, J. Nisbet, C. Noble, G. M. G. Oliver, Professor C. W. Ottaway, Messrs. J. D. Parkinson, R. T. Parry, E. A. Pearce, Brigadier E. S. W. Peatt, Mr. J. F. Peoples, Miss L. H. Phillips, Captain R. N. Phillips, Mr. J. Plenderleith, Colonel L. H. Poer, Messrs. R. Potter, A. Pottie, G. S. Powley, J. E. Powley, J. W. Procter, Professor L. P. Pugh, Messrs. C. Reid, P. Robinson, W. J. B. Robson, J. M. Rorrison, R. F. Ross, D. Russell, P. F. Sambrook, Dr. W. M. Scott, Messrs. K. C. Sellers, W. B. Shaw, K. B. Sinclair, W. B. V. Sinclair, D. C. Smith, G. F. Smith, R. M. Smith, J. Sommerville, A. Spreull, Jun., P. Y. Stead, D. B. Steel, A. Steele-Bodger, J. S. Steward, G. N. Sutherland, E. G. Sutton, R. Swaby, A. Thomson, J. M. Thomson, K. G. Towers, Colonel C. H. S. Townsend, Messrs. W. K. Townson, W. Tweed, G. V. Tyerman, Miss O. Uvarov, Messrs. E. Varley, F. G. Waddington, Major R. F. Wall, Messrs. J. W. Waller, A. L. Walther, T. Watkins, A. H. Watson, J. Watson, C. Weighton, Professor and Mrs. W. L. Weipers, Messrs. J. Wight, E. Wilkinson, J. M. Wilson, T. Wilson, Mr. and Mrs. D. H. Witherington, Messrs. C. R. Wood, R. I. Wood, Miss C. A. Woods, Mr. R. H. Woods, Professor G. H. Wooldridge, Mr. A. N. Worden, Professor J. G. Wright, Messrs. G. L. Yockney and A. Young.

Overseas Representatives

Lieut.-Colonel R. O. Scott—representing American Veterinary Association.

Mr. R. H. Heywood, B.V.Sc.—representing High Commissioner for Australia and Australian Veterinary Association.

Sir Frank Ware, C.I.E., F.R.C.V.S.—representing High Commissioner for Canada.

Professor C. A. McGaughey, M.A., M.Sc., M.R.C.V.S., D.V.S.M. (Ceylon), Mr. C. Perumal Pillai, M.R.C.V.S., D.V.M.—representing High Commissioner for Ceylon.

Mr. E. de Nooy—representing Dutch Veterinary Association.

Major C. R. Chadwick, O.B.E., M.R.C.V.S.—representing Iraq, Veterinary Association.

Dr. R. A. Alexander, Director of Veterinary Services, representing South African Government.

Overseas Visitors

Mr. Forsyth, New Zealand.

Mr. I. C. Johnstone, Australian Scientific Liaison Office, London.

Mr. J. K. L. Kesteven, Food and Agriculture Organisation, United Nations.

Dr. Marcus Mason, U.S.A.

Mr. I. W. Montgomery, Australia.

Dr. Leslie Newton, Queensland.

Representatives of Government Departments

Ministry of Agriculture—Mr. J. N. Ritchie, B.Sc., M.R.C.V.S., D.V.S.M., Mr. H. B. Allan, M.R.C.V.S., D.V.S.M.

Ministry of Food—Mr. L. B. A. Grace, M.R.C.V.S., D.V.S.M.

Ministry of Health—Dr. W. H. Bradley, Mr. T. A. Hole.

Department of Agriculture for Scotland, Department of Health for Scotland—Mr. D. S. Barbour, M.R.C.V.S.

Government of Northern Ireland—Professor H. G. Lamont, M.R.C.V.S.

Isle of Man Board of Agriculture—Mr. R. H. Hawkins, M.R.C.V.S.

Department of Agriculture, Dublin—Mr. P. A. Rogan, M.R.C.V.S., D.V.S.M., Mr. P. Harnett, M.R.C.V.S., Professor T. G. Browne, M.Sc., M.R.C.V.S., Mr. J. P. Nowlan, M.R.C.V.S.

Royal Army Veterinary and Remount Service—Lieut.-Colonel J. Clabby, M.B.E., R.A.V.C., Major G. D. Young, M.B.E., R.A.V.C., Major I. S. MacLennan, R.A.V.C.

Representatives of Local Authorities

City of Belfast—Mr. A. McLean, B.Sc., M.R.C.V.S., D.V.H.

City of Birmingham—Mr. G. C. Allen, M.R.C.V.S., D.V.S.M.

City of Cardiff—Councillor W. Groves, Mr. J. H. M. Hughes, M.R.C.V.S., D.V.S.M.

City of Glasgow—Councillor J. Duffy, J.P., Mr. S. G. Abbott, M.B.E., M.R.C.V.S., Mr. C. B. Somerville.

City of Manchester—Alderman Burgess, Councillor A. Donovan, J.P., Mr. D. E. Orr, M.R.C.V.S., Mr. L. Kirkham, A.M.INST.R., Alderman Fitzsimons.

Newcastle-upon-Tyne—Mr. H. Thornton, B.V.Sc., M.R.C.V.S.

City of Peterborough—Councillor Chamberlain, Mr. H. W. Townson, M.R.C.V.S.

City of Portsmouth—Mr. R. Scoular, M.R.C.V.S.

Preston—Mr. F. J. Proctor, M.R.C.V.S., D.V.S.M.

Institute of Meat—Dr. W. R. Wooldridge, M.Sc., M.R.C.V.S.

Students' Representative Council, Royal (Dick) School of Veterinary Studies—Mr. B. C. R. Griffiths.

Cambridge University Students' Veterinary Society—Mr. Mark Fussell.

VISITORS

Captain E. H. Allen, Mrs. T. H. Allen, Mrs. G. Atkinson, Mr. P. P. Beattie, Mrs. G. L. Beaumont, Messrs. P. W. Blackburn, Mrs. E. C. Bovett, Mrs. J. W. Bruford, Captain R. A. Burnham, Dr. A. B. Burns, Mr. W. A. Burns, Mrs. H. E. Bywater, Mr. J. Bywater, Mrs. C. R. Chadwick, Mr. G. H. Chamberlain, Dr. E. Crook, Mrs. M. M. Dall, Dr. J. Doddican, Mrs. G. Donald, Mrs. J. Duffy, Mr. and Mrs. Eaton, Mr. E. H. Elston, Dr. and Mrs. H. Enoch, Dr. H. T. Findlay, Mrs. Forgrave, Miss H. Gibson, Mrs. R. E. Glover, Mrs. and Miss L. Gordon, Mrs. A. M. Graham, Mrs. P. S. Hastie, Mrs. S. G. Hebeler and family, Mrs. M. Hewetson, Miss J. Hickman, Mrs. B. W. Hill-Owens, Messrs. A. R. Holdsworth, N. H. Hole, Mrs. H. Holroyd, Mrs. H. E. Hughes, Mrs. Ingram and family, Messrs. M. B. Jacob, J. Jenkins, Mrs. S. Jennings, Mrs. W. O. Jones, Mr. S. J. Jordan, Mrs. A. J. Kennedy, Mrs. Kirkham, Mrs. E. E. Lambie, Mrs. J. S. Lauder, Messrs. A. V. Leitch, J. J. Lyons, Captain J. A. McBee, Mrs. McClintock, Mr. A. W. Macdonald, Mrs. J. McIndoe, Mrs. McKellar, Mrs. E. McLean, Mr. B. A. Martin, Mrs. H. T. Matthews, Mrs. S. J. Motton, Mrs. C. T. Murphy, Mrs. J. Nisbet, Mrs. G. M. G. Oliver, Mrs. B. G. Parry, Mrs. M. A. Pearce, Mrs. C. P. Pillai, Mrs. G. S. Powley, Mrs. J. O. Powley, Mrs. J. Procter, Mrs. L. P. Pugh, Mr. H. Raeside, Miss P. F. Robinson, Mr. M. Russell, Mrs. P. M. Sambrook, Mr. J. Smith, Mrs. R. M. Smith, Messrs. J. M. Somerville, T. Spence, Mrs. A. Spreull, Mrs. E. A. Swaby, Captain J. L. Terry, Messrs. J. Thompson, Hugh Thornton, Mrs. W. Tweed, Mrs. F. G. Waddington, Miss M. R. Waddington, Mr. C. E. Waterhouse, Mrs. A. H. Watson, Mrs. E. Williams, Mrs. G. H. Wooldridge, Mrs. W. R. Wooldridge, Mrs. A. J. Wright and Mr. Michael Wright, Mrs. J. G. Wright and Miss C. Wright.

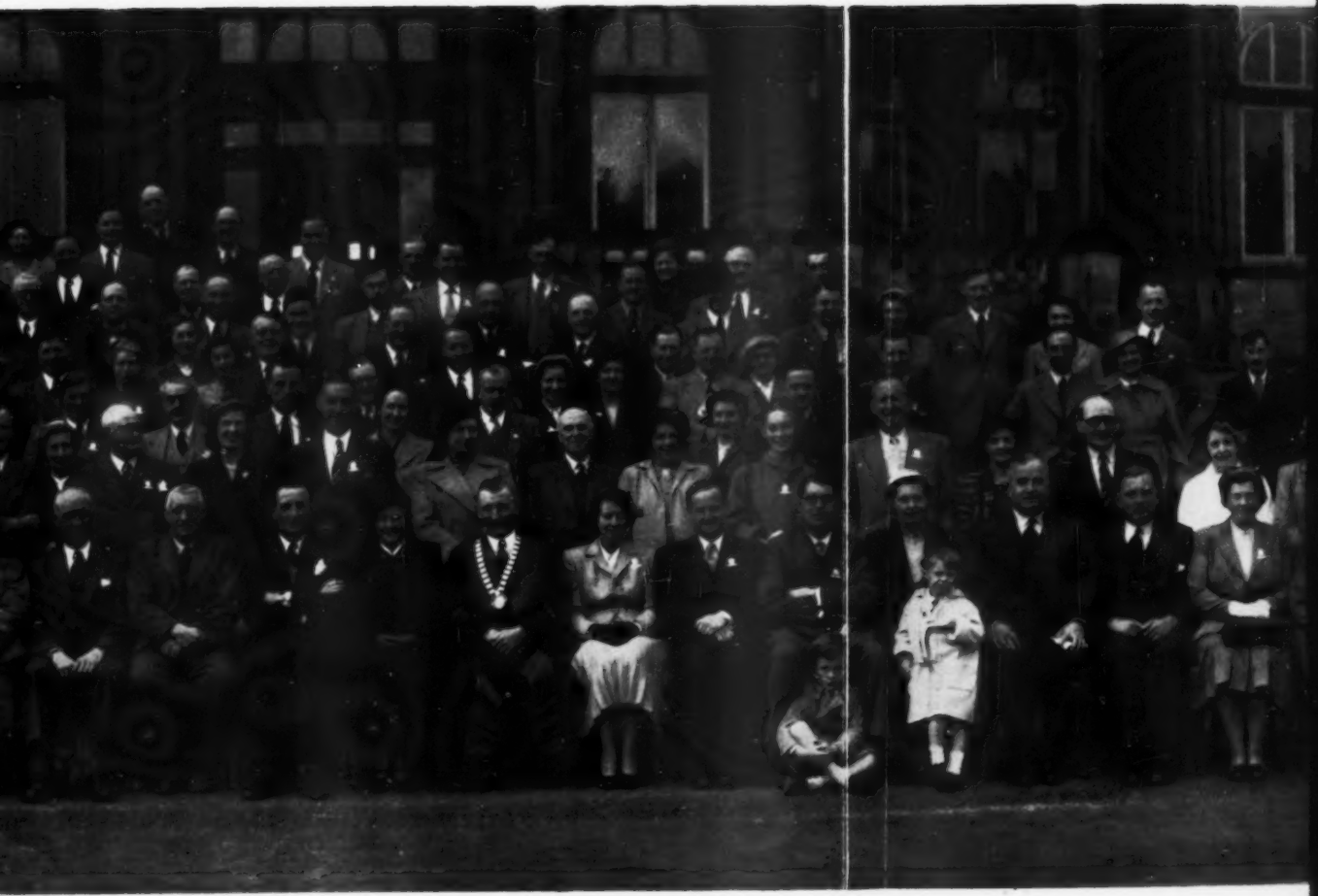
Undecipherable signatures	9
Total (signed) attendance (constituting a record)	**390**
Attendance at 1951 Congress	277

Graham Powell, 35, James Street, Harrogate.

OPENING MEETING: CIVIC WELCOME

L.-R.: Mr. J. O. Powley (Chairman, Provisional Committee), Mr. A. M. Graham (President-Elect), Mrs. Wright, The Mayor of Harrogate (Councillor A. V. Milton, J.P.), Mr. Alan J. Wright (President), Mr. F. Knight (General Secretary), Mr. S. F. J. Hodgman (Senior Vice-President), Mr. H. E. Bywater (Hon. Treasurer), Mr. H. F. Hebeler (Hon. Secretary).

BRIT



BRITISH VETERINARY ASSOCIATION ANNUAL CONGRESS, HARROGATE, 1952

TE, 1952

Photo: Panorgraphs Limited, 63, Erskine Street, Liverpool, 6.

OPENING MEETING AND CIVIC WELCOME

The 1952 Congress at the Royal Hall, Harrogate, was opened on Monday, September 8th, by His Worship the Mayor of Harrogate (Councillor A. V. Milton, J.P.) in the presence of a large number of members and visitors. The President of the Association, Mr. Alan J. Wright, M.R.C.V.S., was in the chair and was supported by the Senior Vice-President, Mr. S. F. J. Hodgman, the Junior Vice-President and President-elect, Mr. A. M. Graham, Mr. H. F. Hebeler, Hon. Secretary, Mr. H. E. Bywater, Hon. Treasurer, Mr. G. Seaton Powley (Chairman, Provisional Committee), Mrs. Alan Wright and Mr. F. Knight, General Secretary.

The PRESIDENT: This is the opening meeting of the 70th Congress of the British Veterinary Association and His Worship the Mayor has kindly come along to open it for us. I understand that the Mayor has been a man of many parts; at one time he almost became a fully fledged member of the medical profession but seeing the error of his ways and the greater attraction of commerce he turned his attention in that direction. I have the honour and pleasure of introducing to you the Mayor of Harrogate, Councillor A. Milton. (Applause.)

The MAYOR OF HARROGATE: I do bid you welcome to Harrogate. We are always glad to see people here, we think we like to live here and if we have anything here which appeals to you we are glad for you to share it. We hope you will have a very happy Congress. Your President told you that I was nearly a member of the medical profession; he did not tell you that after some flying as a pilot in the 1914-1918 war I just could not face the examination. (Laughter.) I farmed for about 10 years and I got to know quite a number of members of your profession. I was astonished at, and have a profound admiration for, the way in which they were able to deal with the dumb members of this world. After a little experience and thinking back on my own medical studies I came to the conclusion that perhaps that was an advantage; at least one is spared the confusion which often happens in the other sphere. I do want to say this to you —that if there is anything you require whilst you are in Harrogate we are at your service.

I hope, with the Mayoress, to see you at our reception to-night and to welcome you there. I trust that this will be a very successful Congress. (Applause.)

The PRESIDENT: On behalf of the British Veterinary Association I do thank you for so kindly coming and opening this Congress, also for the very nice welcome you have given to us. I am sure that we shall have a very happy and instructive week with you in this beautiful borough. I have already heard from all quarters how impressed everybody is with the beauties around us in this lovely town. Many of us are looking forward to exploring as much as possible the scenery in the town and the surrounding countryside. I would like to thank you and the Council for the facilities which you have so readily and willingly placed before us in this Congress. We shall have the pleasure of being your hosts in the coming week and I do ask that you and your good lady should come and enjoy yourselves amongst us. I can assure you of a happy time. At a later stage in the proceedings I shall have the opportunity of thanking you in a more adequate and appropriate manner for the facilities placed before us.

I thank you for the marvellous send-off you have given us and we are looking forward to an enjoyable week with you. (Applause.)

The Mayor then withdrew.

WELCOME TO OVERSEAS DELEGATES AND REPRESENTATIVES OF GOVERNMENT DEPARTMENTS AND LOCAL AUTHORITIES

The PRESIDENT: I would like to welcome our delegates and guests from overseas, and the delegates and guests from various Government departments and local authorities. We have always prided ourselves that our annual Congresses are happy family gatherings and I do hope you will enter into this Congress in that spirit; make yourselves known to us and thoroughly enjoy yourselves. Many of you are old friends, many are new, all we welcome most heartily to this week at Harrogate.

I would particularly like to extend a hearty welcome to some of the younger members from the Student Unions; I hope they, too, will come forward and make themselves known to us and have a thoroughly good and instructive time. There will be an opportunity later in the proceedings for you to deliver any messages or greetings which you may have brought with you. For the present I will content myself with bidding you welcome.

The General Secretary then read the names of overseas and other delegates attending Congress, and of the places from whence they came, that of each representative being greeted with applause. (Their names are included in the special section devoted to them in the Congress attendance list published immediately following the President's address with which this issue opens.)

OPENING OF THE EXHIBITION OF SURGICAL INSTRUMENTS, DRUGS, BOOKS, ETC.

The PRESIDENT: I have now the honour and duty of declaring open the exhibition of surgical instruments and other materials for our profession. Firstly, on behalf of the Association I would like to offer the representatives and the firms exhibiting our sincere apologies for the hitch which occurred in the preparation of the exhibition. I can assure you that it was no fault of ours and I congratulate everyone concerned on the splendid way you have worked to get this exhibition ready for opening this morning. (Hear, hear.)

It is my privilege and honour to welcome all those representing the different firms; we do hope that you will have a very enjoyable time with us. Many of you have been with us for many years and know the ropes and I am sure you will all have a jolly week. This exhibition has become an integral and essential part of our Congress. It is of great scientific value and many of us fail to realise the work that the firms and their backroom boys are doing to keep us up to date, striving all the time to improve the quality, range and efficiency of their products, which are making work in the field much easier and much more efficient. I have very great pleasure in paying a tribute to you all and to your houses and concerns, and it is with very great pleasure that I now declare this exhibition open. After we have finished in this hall I will tour the exhibition and I hope as many as possible will come round the stalls and stands. The best wish I can give you is that interest and attendance will be high and trade good. (Applause.)

Mr. E. NIXON, of Messrs. May and Baker, Ltd.: I have the privilege of speaking on behalf of all the exhibitors who have their stands in the adjoining hall. We thank you, Mr. President, and your charming lady, for the honour of your presence to-day and we as exhibitors do hope that the members of the veterinary profession will take advantage of the opportunity of visiting our stands. We shall be very glad to make the personal acquaintance of many

Concluded at foot of col. 1, page 670.

BRITISH VETERINARY ASSOCIATION
70th Annual General Meeting

The 70th annual general meeting of the Association was held in the Royal Hall, Harrogate, Yorks, on Wednesday, September 10th, 1952, at 8 p.m., with the President, Mr. Alan J. Wright, M.R.C.V.S., Macclesfield, in the chair.

The list of those attending the associated Congress will be found following the President's Address at the commencement of this enlarged issue recording the proceedings.

Following is the list of members who sent apologies for absence from the annual general meeting: Mr. L. G. Anderson, Dr. N. S. Barron, Messrs. A. J. Beeson, A. G. Beynon, J. D. Blaxland, D. K. Bryson, G. K. Buckler, F. Christopher, Sir Weldon and Lady Dalrymple-Champneys, Messrs. B. A. Claxton, H. W. Dawes, Major J. J. Dunlop, Dr. J. T. Edwards, Messrs. S. J. Edwards, John A. Flynn, Miss M. J. Freak, Mr. L. St. Bel Golledge, Dr. O. V. Gunning, Mr. R. W. Hall, Brigadier A. G. Heveningham, Mr. D. L. Hughes, Major Hamilton Kirk, Mr. G. V. Laugier, Miss M. V. Lævie, Dr. R. Lovell, Messrs. E. F. McCleery, G. P. Male, J. Omand, J. Pasfield, G. F. Pickering, W. A. Pool, Professor Alex. Robertson, Messrs. W. G. Robinson, W. T. Rowlands, Walter Scott, Dr. A. W. Stableforth, Messrs. W. Trigger, H. M. Wilson and Dr. W. R. Wooldridge.

PUBLIC PROCEEDINGS

The SECRETARY (Mr. F. Knight) read the notice convening the meeting.

The PRESIDENT: I will now ask the Secretary to read some messages that have been sent to Congress.

The SECRETARY accordingly read messages wishing success to the Congress which had been received from the President of the Norwegian Veterinary Association, and from Mr. and Mrs. J. R. Barker, who had not yet returned from their visit to the Antipodes.

PRESIDENTIAL ADDRESS

The PRESIDENT: The next item on the agenda is the presidential address. (The President then read his Address from the Chair, which was enthusiastically received. It is reproduced at the commencement of this issue.)

Mr. S. F. J. HODGMAN (Senior Vice-President): With your permission, Sir, and ladies and gentlemen, I rise to propose a vote of thanks to our President for his admirable address to-day. In doing so, I should like to remind you that he has given this subject a great deal of thought. I know it is very near to his heart, but he did feel some apprehension because, since he was talking on a domestic matter, he feared that perhaps some of our visitors might be a little disappointed and not deeply interested. I do not agree with that view and I think it may be well worth while for all of us to read his address again when it is published in the *Record*, " to read, mark and inwardly digest."

Sir, on behalf of those present, I thank you most sincerely for a very able address.

The vote of thanks was carried by warm applause.

---

of those with whom we correspond during the year. We are anxious to give our full co-operation towards the advancement of veterinary science and we appreciate the help that the veterinary profession gives us. We trust that we ourselves can be of assistance in this advancement.

I would ask you, Mr. President, and Mrs. Wright to accept a small memento in commemoration of this occasion.

[Mr. Nixon, amid applause, then presented Mrs. Wright with a charming bouquet and the President with a set of tea spoons.]

Mrs. WRIGHT: It gives me very great pleasure to say thank you very much for these lovely flowers and the tea spoons which you have presented to my husband. They will remind us of an extremely interesting and happy Congress.

The PRESIDENT: Thank you, Mr. Hodgman, for your kind remarks, and you, ladies and gentlemen, for the wonderful way in which you have received my effort.

MEETING PLACES FOR 1953 AND 1954

The PRESIDENT: The next item on the agenda is meeting places for 1953 and 1954, and I will ask the Secretary to read the recommendations.

The SECRETARY: The Council recommend that the decision to hold next year's Congress in Aberdeen be confirmed and that the period of Congress should be, provisionally, the week beginning September 6th.

The PRESIDENT: You have heard the unanimous recommendation of Council to this annual general meeting that the venue for our 1953 Congress should be Aberdeen. In connection with that, I should like to say that tentatively we have already fixed the dates because it was felt by our friends north of the border that in view of the Braemar Games and consequent difficulties in getting accommodation we should be early in giving hotels ample warning. It was felt that the date September 6th to 12th—a week similar in time to that of this year's Congress—should be fixed, unless anything unforeseen happens. One reason for choosing that week was that the Braemar Games commence on the preceding Thursday, and if any of you wish to include them in your visit to the north of Scotland you will be able to do so.

I, therefore, put from the chair the recommendation that our 1953 Annual General Meeting and Congress be held in Aberdeen.

Mr. J. M. INGRAM: I have great pleasure in seconding that.

The recommendation was then put to the meeting.

The PRESIDENT: That is carried.

Mr. W. J. B. ROBSON: On behalf of the North of Scotland Division of the B.V.A., it is a very great pleasure to us to learn that the Association are to visit our city next year, and I can assure you all of a very hearty and warm welcome. I have heard it said that Aberdeen is somewhat distant from southern England, but I can assure the members that we in the north of Scotland consider the distance from Aberdeen to southern England is exactly the same! We find it not in the least difficult to go to the south, and, as I say, I can assure you of a very hearty and warm Scottish welcome.

As the President has inferred, the Braemar gathering is an outstanding event of the Scottish season and it can be incorporated in a very pleasant holiday as it will be held close to the time of the opening of Congress.

The PRESIDENT: Thank you. I can assure all members that in our preliminary dealings with our friends in the north of Scotland there is every sign that augurs well for a really good Congress in Aberdeen.

The SECRETARY: In connection with 1954, letters were read from the Town Clerk of Torquay, and from the Eastern Counties Division withdrawing an earlier invitation to hold Congress in Cambridge, while a suggestion to hold Congress in Bristol was also made. After discussion, the Council decided to recommend that Torquay be the venue for 1954.

The PRESIDENT: This is a recommendation which will, of course, come up before you next year. It is for information and it will come up for your approval or otherwise at the corresponding meeting next year.

ELECTION OF PRESIDENT FOR 1952–53

The PRESIDENT: It is with very great pleasure that I now put before you the unanimous recommendation of Council that Alistair M. Graham be our President for 1952-53. (Applause.)

In electing Alistair Graham as your next President you are electing a man of sterling character and ability and also

you are making history, for after a considerable number of years and considerable pressure at last we have as our next President a member of the Animal Health Division. (Applause.)

In "Jock" Graham you have a man of wide experience. He is highly esteemed and respected in the Ministry's service, and has attained the post of Superintending Officer. He was in practice for three years and then joined the Ministry of Agriculture and Fisheries. Although holding a whole-time appointment, he has had close association and experience with all branches of the profession. Not only has he been in practice but has had close contact with and worked in research and administration and has had very close liaison and association with practitioners in the field, thus realising their problems and difficulties.

In Association affairs he has had a very long and active service, being a member of Council for many years and holding the appointment of Chairman of the Home Appointments Committee and also that of Chairman of a very important committee, the Sub-committee on Expenditure.

In every way Alistair Graham is fully qualified as your next President, and I am certain that in him we shall have a most able and capable officer. We are indeed fortunate and should congratulate ourselves on having a man of such character, ability and knowledge, and one who has such a deep interest and concern in the affairs of our Association. In him I know that every one of us can put complete faith and trust.

Therefore, it is with the greatest pleasure and confidence I propose that Alistair M. Graham be our President for the ensuing year. (Applause.)

Captain G. ATKINSON: It gives me great pleasure, and I deem it a privilege, to second the President's proposal that Mr. Graham be the next President of this Association.

The President and others have said many kind words in appreciation of the fact that it has been possible to nominate as President of our Association a member of the veterinary staff of the Ministry of Agriculture. We colleagues of Mr. Graham are very sensible of this appreciation of the part played by the veterinary officers of the Ministry in the affairs of the Association and of the friendliness it indicates between the veterinary officers of the Ministry and other branches of the veterinary profession. We, his colleagues, are very proud to have as a colleague one who has been deemed worthy of this high honour.

I should like to endorse all that you, Sir, have said about Mr. Graham. I have known him for many years as a friend and a fellow worker. He is a staunch friend, wise in counsel and steadfast in purpose, and his wide experience not only in the affairs of this Association but also in other spheres makes him eminently suitable to carry on worthily, as I am sure he will, the traditions of this high office and to further the interests of this Association. (Applause.)

The PRESIDENT: If there are no other nominations, I will put the proposition to the meeting.

The proposition was duly put to the meeting.

The PRESIDENT: I declare Mr. Graham unanimously elected President of the British Veterinary Association for 1952-53, and I should like to have the honour of being the first to congratulate him. (Applause.)

Mr. A. M. GRAHAM: Thank you very much, Sir, and you, Captain Atkinson, for the very kind words you have said about me; and thank you, ladies and gentlemen, for electing me to this very honoured position. I only hope I shall justify the faith and trust you have put in me.

I do realise that my selection for this high office is a tribute to my colleagues in the Animal Health Division, many of whom have done very great work for this Association.

I can assure you that I shall to the utmost of my ability endeavour to further the interests of the Association.

PRESENTATION OF THE DALRYMPLE-CHAMPNEYS CUP AND MEDAL

The PRESIDENT: The next item on the agenda entails a very pleasant duty that I have to perform.

Firstly, I should like to apologise to you on behalf of Sir Weldon Dalrymple-Champneys and Lady Ann for their inability to be here. They have asked me to express to you their deep regret at being unable to be with you and have assured me that their thoughts would be with us at this time. Unfortunately, they are abroad and it is impossible for them to be with us in person.

This Cup, as you know, was presented to this Association by Sir Weldon Dalrymple-Champneys in the year 1934 as a result of his deep esteem for and faith in the profession. He always has been a staunch friend of the profession and he was so imbued with the quality of it that he felt he would like to make a presentation of this cup and medal. It was made as an award to a member of the Association to mark and recognise scientific and clinical work of outstanding merit which it is considered will encourage the advancement of veterinary science.

The award is made each year. The selection committee consists of Sir Weldon and a committee consisting of the past recipients of the prize. This year it has been awarded to Professor R. E. Glover, M.A., B.Sc., F.R.C.V.S., in recognition of his work in promoting veterinary research generally in the country, especially in tuberculosis and virus diseases.

Professor Glover qualified in 1921 and was elected an F.R.C.V.S. in 1933 for a thesis on the "Study on Tuberculin with special reference to the Double Intradermal Test," and received the honorary degree of M.A. of Cambridge University in 1936. He was granted the Jubilee Memorial Scholarship of the Royal College of Veterinary Surgeons in 1921 and also a Research Scholarship of the Ministry of Agriculture.

His aptitude for research work was recognised when he was invited by the Tuberculosis Committee of the Medical Research Council to participate, at Hampstead, in investigations on the double intradermal test; work which was subsequently transferred to Cambridge when Professor Glover joined Professor Buxton's staff in February, 1924. Professor Glover also assisted the work of the Distemper Research

Graham Powell, 35, James Street, Harrogate.

Professor R. E. Glover receives the Dalrymple-Champneys Cup and Medal at the hands of the President.

Committee during his short stay at the National Institute for Medical Research at Hampstead by making a general bacteriological and pathological examination of a series of "field" cases of dog distemper. His subsequent scientific activities at Cambridge included researches not only into a number of animal pock diseases but also important studies on several problems connected with tuberculosis, contagious abortion in ewes and "fowl paralysis."

In 1927 he left the Institute of Animal Pathology at Cambridge at the call of the Medical Research Council, to succeed the late Major G. W. Dunkin (on the latter's departure for the A.R.C. Field Station at Compton) as Superintendent of the Farm Laboratories of the National Institute for Medical Research at Mill Hill.

In 1947 he became the first Director of the Laboratory Animals Bureau, a Medical Research Council unit. In 1949 Professor Glover was appointed to the newly created Chair of Veterinary Pathology in Liverpool. Therefore, ladies and gentlemen, I am sure you will all agree that Professor Glover is well worthy of this award.

There was warm applause as Professor Glover walked forward to receive the award, and the President continued :—

Professor Glover, on behalf of Sir Weldon Dalrymple-Champneys, I am greatly honoured to present you with this award, the Cup and Medal which has become known as the blue riband of this profession. I am sure you must be very proud to receive it, knowing that your professional colleagues have deemed you worthy of it.

The presentation was then made.

Professor R. E. GLOVER : May I, Sir, in the first place thank you most sincerely for the great honour you have conferred on me by giving me this Cup and Medal. I can assure you it is an honour which I very greatly appreciate. May I also add to what you have said about our regret that Sir Weldon and Lady Ann are unable to be with us to-day.

You have referred to the origin of this Cup. I have been looking back into its history and I have been very much impressed by the fact that the former recipients of the Cup have used this occasion to testify to the assistance they have received from their colleagues. Indeed, if all those who merited this Cup received their award we should not require a cup but an alabaster monument! I should like in my turn to pay a tribute to the many colleagues who have helped me first in my work at the Institute (now Department) of Animal Pathology at Cambridge, then at the National Institute for Medical Research at Mill Hill and now in my present position at Liverpool. I have been most fortunate in having colleagues who have always been most inspiring and most unselfish, and if I have made any small contribution to science I can assure you it is very largely due to that help which I have received from my colleagues. As a result of contact with them, one gets to know their little idiosyncrasies and one also learns to appreciate their different outlooks. Possibly the most significant fact which has emerged during my 25 years of research is the gradual broadening in the scope of our work and the mutual benefits of collaboration with workers in other fields.

Sir, may I thank you most sincerely for the kind words you have said about my career. I do appreciate them very much. May I also thank the committee and the Council for making this award to me, and you, ladies and gentlemen, for the very kind way in which you have received their decision. (Applause.)

The PRESIDENT : I will now adjourn this meeting. It will be resumed after a 10-minute interval, when it will be for members only.

Non-members and visitors then withdrew.

The Business Meeting

ANNUAL REPORT AND BALANCE SHEET

The PRESIDENT : We now continue the annual general meeting, and the next item to be dealt with is the annual report and balance sheet.

The SECRETARY : I will read the report of the auditors. (The report of Messrs. Fairbairn, Wingfield & Wykes, Chartered Accountants, the auditors, was then duly read.)

The PRESIDENT : The report and balance sheet were approved by your Council this morning, and I should now like it to be proposed and seconded that this report and the accounts be adopted.

Captain G. ATKINSON : I propose.

Captain S. J. MOTTON : I second.

The proposition was then put to the meeting.

The PRESIDENT : It is carried.

ELECTION OF VICE-PRESIDENTS AND OTHER OFFICERS

The PRESIDENT : The next item is the election of two Vice-Presidents (one of whom shall be immediate Past-President and the other President-Elect), Hon. Treasurer, Hon. Secretary, General Secretary, and Auditors.

Mr. S. F. J. HODGMAN : The first officer to be elected is the Senior Vice-President, and I propose that Mr. Wright be elected to that office.

The motion was formally seconded and carried by acclamation.

The PRESIDENT : Thank you very much.

The next officer to be elected is the Junior Vice-President and President-Elect, and I have very much pleasure in proposing from the chair that Mr. Alexander Thomson be our President-Elect.

Alex. Thomson is very well known to many of you as a practitioner of great repute north of the border. He graduated from the Glasgow Veterinary School in 1927 and from there went into general practice and later went into partnership with Professor Weir in Glasgow, where now he is, as you all know, a part-time lecturer at the Glasgow Veterinary College, now the Glasgow University Veterinary School. It was in 1932 that Mr. Thomson was elected to the Hon. Secretaryship of the West of Scotland Division and was honoured by being President of the Scottish Branch in 1939. Also, Mr. Thomson was the Local Secretary of the highly successful Congress that was held in Glasgow in 1938.

Besides this, he is very intimately concerned in the public life of the west of Scotland. As a member of this Association, he has been a very valued and active member of the Council and of committees for many, many years. Many of you are well aware of the tremendous amount of work he and others did on the Organising Committee in connection with the welfare societies, and he is definitely a man of sound judgment and ability with the interests of the profession and this Association at heart. I am confident, ladies and gentlemen, that we are very fortunate in securing the services of a man of his calibre and character.

I, therefore, have the greatest pleasure in proposing that Alex. Thomson be our Junior Vice-President and President-Elect.

Mr. A. POTTIE : I second your nomination, Sir, of Alex. Thomson as President-Elect. Alec has been an enthusiastic worker in the Association and a member of the Council for 22 years. In that 22 years I do not think he will have missed many meetings. I feel that this nomination is a furtherance of your Presidential Address, Sir, and I have great pleasure in seconding it. (Applause.)

The proposition was put to the meeting and carried with enthusiasm.

The PRESIDENT: Mr. Thomson, you have been unanimously elected at the annual general meeting as our Junior Vice-President and President-Elect, and I congratulate you most sincerely.

Mr. A. THOMSON: On hearing your catalogue of my activities over the past years, Mr. President, I am reminded of grey hairs, though the present President and Past-President have none yet.

I am conscious of the very great honour and the responsibility which you have placed upon my shoulders, and I only hope that the account of my stewardship at the end of my term of office will be to your satisfaction. I will do what I can to the best of my ability. (Applause.)

The PRESIDENT: The next office to be filled is that of Hon. Treasurer, and it is the unanimous recommendation of Council that our worthy and stalwart friend and adviser, Mr. Bywater, should carry on in that position. I have very great pleasure in proposing from the chair that Mr. H. E. Bywater be re-elected as Treasurer of this Association. (Applause.)

Professor G. H. WOOLDRIDGE: As a past Treasurer, I should be very delighted indeed to second that proposition. I do not know of a more willing bearer of the burden than Mr. Bywater and I am sure that he will continue to fulfil his office as successfully as he has done for some years.

The proposition was put to the meeting.

The PRESIDENT: Carried unanimously. (Applause.) Mr. Bywater, I welcome you to the Treasurership. I can assure you all that very few realise the terrific amount of work, not in treasury matters alone, that our friend here does on behalf of the Association and all of you, at the office and elsewhere.

Mr. H. E. BYWATER: Mr. President, ladies and gentlemen, it would be untrue to say that I am not a little gratified by the fact that you see fit to express your continued confidence in me. Although my hair is still black, it does not mean that there is not a certain amount of worry connected with the office.

It is by rule and practice of the Association that your officers hold office for only a limited number of years, with the exception of your Hon. Treasurer who, for good or ill, the by-laws of the Association state, you can re-elect year by year for as long a period as you wish. I have repeatedly, over the last few years, suggested to the General Purposes and Finance Committee that they might find another Treasurer; though I am fairly happy in the job and shall always be prepared to serve you whether I hold office or not and do the best I can for the Association in any way. But when I repeated my little plea to the committee I was told that I should have to find a different record.

I am afraid I have not found a different record, but I am going to play it in a different place and I am going to ask you members of Council to consider seriously whether it is in the interests of the Association to keep this old horse in harness and whether it would not be to the advantage of the Association to find another Treasurer.

I do not want a reply to that now because I may get a shock, but I do suggest to members of Council that they should seriously consider whether it is not time to look round to find a successor to me in this office. It is, of course, of advantage to the Association to have an officer who is not changed as often as some of the others; it does help in continuity, and it assists very materially if he is situated near London, but I have been your Treasurer since 1938. There is a little feeling between those who are north and those who are south of the border, and I am rather proud at having been elected in Glasgow on the proposition of the then President, who was a Scotsman. Even so, I think that our friends from north of the border should begin to scratch their heads and if they cannot find a Treasurer from the north then they had better look south again, but I would suggest that you begin to look around for a successor.

Dr. R. F. MONTGOMERIE: If we do start looking around, let us use a telescope—and put the wrong end to our eye! We could perhaps find a man for the Treasurership who thinks that his job is to look after the finances and that it stops there. The great advantage of Mr. Bywater, as I see it (if you will excuse me putting it at this low level) is that while he is the Treasurer he is always ready to come in as an officer as one in a cabinet—if I may use your word, Sir—and that is very important. That is why I suggest that in looking round for a successor we should use a telescope and put the wrong end to our eye. (Hear, hear.)

The PRESIDENT: Thank you, Dr. Montgomerie, for those very kind and true remarks.

The proposition was put to the meeting and carried.

The PRESIDENT: The next item is the election of the Hon. Secretary. As you know, according to the Articles of Association, the Hon. Secretary is allowed to hold office for three years. Mr. Hebeler has now, I believe I am right in saying, held this office for two, and therefore it is with the greatest pleasure that I propose from the chair that Mr. Hebeler should again be re-elected, for his third year of office.

Mr. Hebeler has been in every sense of the word a really good Secretary. He has helped the officers in every way possible. He is always ready to do any job allocated to him and I am sure that we, the officers, and you, the Council and the Association, should be really grateful and happy because we have been able to find such a good young man to fill this post. (Applause.)

Professor W. L. WEIPERS: I have pleasure in seconding your proposal.

The proposition was put to the meeting.

The PRESIDENT: That is unanimous.

Mr. H. F. HEBELER: Mr. President, Professor Weipers, ladies and gentlemen, being rather acutely conscious of the fact that I am in company with a lot of metaphorical grey beards, I am only going to say Thank You, and sit down.

The PRESIDENT: Next comes the election of the General Secretary. Here, again, it is with very great pleasure that I propose from the chair that Mr. Knight be re-elected to this position.

I am certain that it is only after one has passed through the various offices, and through this chair, that one can have the smallest knowledge of the terrific amount of work that Mr. Knight does for us. He literally is a walking encyclopaedia, and I am sure the Past-Presidents will agree with me when I say that I do not know what we should have done if it had not been for Mr. Knight.

He and his staff at 36, Gordon Square are always willing and ready at all hours to carry out the wishes of the officers and of you, the Council and Association. I should here at this moment like to thank him and his staff for the work they have put in to make this Congress, I believe I am correct in saying, a success. It is with the greatest pleasure that I make this proposition. (Applause.)

Professor G. H. WOOLDRIDGE: Seconded by all!

The PRESIDENT: Very well said.

The proposition was put to the meeting.

The PRESIDENT: Carried.

The SECRETARY: Mr. President, ladies and gentlemen, I thank you very much indeed for your kind remarks and words of appreciation of the work we do at Gordon Square. We have a very good and loyal staff there and it is very gratifying to all of us to know that our efforts are so much appreciated.

I do thank you sincerely for having re-elected me once again to act as General Secretary and I can assure you, as in the past, it will be my strong endeavour to do everything I possibly can in the interests of the Association. (Applause.)

The PRESIDENT : The only remaining post to be filled is that of auditors. The present auditors are Messrs. Fairbairn, Wingfield & Wykes.

Mr. S. F. J. HODGMAN : I propose, Sir, that they be re-elected.

Professor G. H. WOOLDRIDGE : I have very great pleasure indeed in seconding that they should continue to be our auditors. It was during my term of office that they were first introduced to the affairs of the Association and I am perfectly satisfied that the way they have carried out their duties has met with the approval of all of us and that we cannot improve upon them.

Mr. H. E. BYWATER : They have given very good service.

The PRESIDENT : I should like to add my support to that proposition because during my year of office we have had occasion to seek advice and the auditors have given us very valuable guidance.

The proposition was put to the meeting and carried.

SPECIAL RESOLUTION—ARTICLES OF ASSOCIATION

The PRESIDENT : I will ask the Secretary to read the resolution.

The SECRETARY : That Article 65 (B) of the Articles of Association be amended to read :—

> " Representatives from each Division of the Association, namely, two representatives for the first 50 members or portion thereof and thereafter one representative for every 50 members or portion thereof in excess of 25. Provided always that the total number of representatives from any one Division shall not be more than six."

(The above resolution refers to the number of representatives which a Division may nominate to serve on the Council of the Association. At present the basis is one representative for every 85 members or portion thereof, together with the Hon. Secretary, and the maximum number of representatives which any one Division may nominate is 10, exclusive of its Hon. Secretary.)

The PRESIDENT : You have heard the resolution read out. It has been thoroughly discussed in Council and was passed in Council and recommended to this annual general meeting by an almost unanimous vote. There was a full discussion on it. For the information of those who are not on the Council, you will see that there is now the question of whether Secretaries should be representatives *ex officio*. That point was dealt with for a specific purpose because there was a feeling that some Secretaries of Divisions, though very able Secretaries, might not always be able to spare the time to serve on Council. It was therefore suggested and agreed that part of the old wording should be deleted and that each Division should have the opportunity of either electing its Hon. Secretary as a delegate to Council or electing somebody else in his place, leaving it entirely a matter for the Division's own discretion.

As to the purpose of this resolution, there has been a very strong and real feeling for some considerable time that Council is too large. A large number of new Divisions have been formed, thus causing more and more members of Council to be elected.

It is here for you to discuss, if necessary, and to pass your judgment.

Professor MITCHELL : Could you tell me what the total strength of the Council would now be ?

The PRESIDENT : We have tried to find out what would roughly be the reduction if this resolution were passed, and as far as we can make out it would be somewhere between 20 and 25. It is a bit difficult to work it out exactly, but that is what we estimate would be the reduction.

The old rule made a limit of 10. This means that probably the larger sectional Divisions will suffer a greater reduction in numbers than most of the geographical Divisions. Most of the geographical ones will, in our opinion, suffer very little. Although the Secretary will not be a representative *ex officio* that will be dealt with by allowing two members for the first 50 to be representatives instead of one plus the Secretary for 35.

A MEMBER : The question of someone representing more than one Division has been brought up before. Has that been completely dropped now ? Because that applies to me. I am a member of three Divisions. I should like that matter to be cleared up.

The PRESIDENT : That point was mentioned in the report of Council which appeared in the last *Supplement*, I believe. The matter of dual representation has been seriously concerning the Council and officers of the Association for a great number of years. I should not like even to try to estimate the time that various Past-Presidents and officers have spent on this problem of dual representation and ways and means of overcoming it. Various schemes have been put forward. They have been turned down ; they have been unworkable, and, putting it quite bluntly, at the moment we can see no satisfactory way which would be fair to all of producing a workable scheme that would overcome dual representation. More or less as a compromise, there has been evolved this resolution which, as I have already said, Council recommended almost unanimously to this meeting for approval.

A MEMBER : What is the present number ?

The PRESIDENT : Roughly 185. We cannot say exactly. The numbers are changing almost from quarter to quarter.

Captain T. M. MITCHELL : I beg to move formally that the recommendation as read out by the Secretary be adopted. I do so because for a long time I have felt that the Council was becoming unwieldy. The financial aspect has not been mentioned and that side of the subject was also considered in great detail. To the relief of the Treasurer, one grey hair as been spared him by the recommendation.

Professor W. L. WEIPERS : I second.

The PRESIDENT : Is there any other comment or discussion before I put this proposition ?

The proposition was then put to the meeting and carried, with two dissentients.

The SECRETARY : We understand that the Board of Trade will raise no objection to the alteration that has just been passed.

The PRESIDENT : That, ladies and gentlemen, is an example of the efficiency of 36, Gordon Square !

OTHER MATTERS REFERRED FROM THE COUNCIL

The PRESIDENT : There are no other matters referred from Council.

OTHER BUSINESS

The PRESIDENT : I am informed by the Secretary that there are no other matters he has to bring forward that may be properly considered at an Ordinary General Meeting.

Mr. S. L. HIGNETT : It must be apparent to many that our old friend, wise counsellor and worthy opponent, Dr. J. T. Edwards, is not with us this year. His absence is, of course, due to ill health.

Elliott & Fry, Ltd., Baker Street, W.

ALISTAIR M. GRAHAM, M.R.C.V.S.

President of the British Veterinary Association, 1952-53

I think it would be a nice gesture if the Association, which he has striven to serve for so many years, sent him a message expressing a wish for a rapid improvement in his health. I feel sure that such a gesture could be calculated to lead to a speedy recovery. Not wishing to take any credit due to another, I should like to mention that I put forward this suggestion at the request of Miss Brancker.

The PRESIDENT : Will anybody second ?

Mr. N. H. MATHIESON : I have great pleasure in seconding.

The PRESIDENT : Thank you for that proposition. Dr. Edwards has written a very charming letter, wishing this Congress every success. I had intended writing a personal reply but I honestly feel that what you have suggested will be even more appreciated by him.

We have been very concerned about Dr. Edwards's health, and it came as a great shock to the officers some weeks ago to learn of his serious illness. I am glad to say he is improving, but he has not yet been discharged from hospital. We have written to him on numerous occasions, and quite a number of his old friends amongst you have visited him.

It is, therefore, with the greatest pleasure that I put to you the proposal that a letter on the lines suggested by Mr. Hignett should be sent to our old and respected friend, Dr. J. T. Edwards.

The proposition was carried with applause.

ADJOURNMENT

The PRESIDENT : I now adjourn this meeting until Saturday morning, September 13th.

THE ROYAL HALL (MEETING PLACE OF CONGRESS).

MONTPELLIER GARDENS, HARROGATE.

ALISTAIR MUNRO GRAHAM, M.R.C.V.S.

President of the British Veterinary Association, 1952-53

To Mr. A. M. Graham, Superintending Veterinary Officer of the Ministry of Agriculture, has fallen the honour of becoming this year's President of the British Veterinary Association. His appointment is a particularly happy one because he will bring to his high office in full measure those qualities which are so necessary in the first ambassador of a learned profession.

Mr. Graham has had a wide experience of veterinary problems both in this country and abroad. He is quick to grasp the implications of a difficult situation, logical in his conclusions and sound in his judgment. He is not one to become bogged down by detail, although he has a high appreciation of the value of small pieces of evidence and of the necessity for a thorough sifting of wheat from chaff. These attributes are the unconscious basis of the advice he gives to younger colleagues : " Get your facts right first ; you won't go far wrong then." How sound that is.

Those who meet Mr. Graham for the first time are soon lost in conversation as if they had known him for years. This results from his easy manner and his flair for finding subjects of common interest. His is a kind and cheerful spirit, quite devoid of affectation and egotism.

As a chairman he has few superiors, and this is a quality that will be increasingly appreciated as the year wears on. He has an even temperament, is not easily ruffled, and speaks his mind openly. He will call recalcitrants to order with a smile, and without rancour. He is an experienced negotiator and will prove an able member of any deputation he has to lead on behalf of the Association.

Mr. Graham, who now lives at Maidenhead, was born in Kirkcaldy in Fifeshire on February 24th, 1899. He entered the Royal (Dick) Veterinary College in 1916, a year when the Great War was at its height. After passing his first professional examination in June, 1917, he obtained a commission in the 2nd Royal Scots, in which regiment he served both in France and Germany. He returned to the Royal (Dick) College in the spring of 1919 and qualified in 1921. After three years in agricultural practice he joined the Veterinary Staff of the Ministry in May, 1924. His work in that department has been very varied. In addition to normal field duties, he served for three years in the diagnosis department of the Ministry's Laboratory at Weybridge, and for eight years at the Foot-and-Mouth Disease Research Station at Pirbright. Mr. Graham was for three years a member of the Livestock Export Group, and he has been President of the Association of State Veterinary Officers on two occasions. He was promoted Divisional Veterinary Officer in 1938 and to his present rank of Superintending Veterinary Officer in 1944.

In 1930 he married Christine, only daughter of the late Mr. Colston Hale and Mrs. Colston Hale, of Virginia Lodge, Warminster. Mrs. Graham is well known as a successful exhibitor of flower decorations at many of the major shows. She will add her own unaffected grace and charm to all those official functions which she will be called upon to attend as the wife of the President. They have two sons studying for the degree of B.D.S. at the University College Hospital, London.

The coming year will be one of great activity for Mr. Graham. His colleagues in the Ministry and his host of friends throughout the country will join the writer in wishing our new President good luck, and a very successful term of office.

E. G. M.

THE VETERINARY RECORD

November 8, 1952

THE B.V.A. AT HARROGATE

AMONG the many features of this year's Congress, still fresh in many minds, perhaps the most noteworthy as it was certainly the most gratifying, was the very large attendance. Last year 277 members of the Association were present. This year's figure was 390, a total approached but rarely, one of these occasions being the 1924 Congress at Aberdeen. In this connection, it may be observed that the Congress for 1953 will be held at Aberdeen once again and it may be that the Scottish city will maintain, or even surpass, the record for attendance.

Among the large gathering at Harrogate were many members who, so far as is known, had not attended a B.V.A. Congress before and their presence gave especial pleasure to the President and officers and the organisers. On the other hand, unfortunately, there was only a comparatively small number of overseas delegates. It is to be hoped that next year will see a much more representative gathering of members of the profession from all over the world.

For the first time in the history of the Association, a member of the Animal Health Division was elected President for the ensuing year. It had been hoped that the staff of the Ministry of Agriculture one day would provide a B.V.A. President and at last this has been done in the very welcome and popular person of Mr. Graham. There could be no more happy augury for the closer liaison between the profession and the Ministry than the link that has just been forged.

The various papers given are dealt with elsewhere in this and subsequent issues and though it is difficult amongst so many of high standard to select one paper for particular comment, that given on the first day by Mr. Kesteven was of outstanding interest, coming as it did from the Chief of the Animal Production Branch, Food and Agriculture Organisation of the United Nations. The United Nations, of course, has been in existence only since the end of the war and it is a matter for considerable satisfaction that one of its most important officials should have flown to England especially to address members of the Association assembled at Harrogate.

Mention should be made also of the exhibition of colour films of surgical operations that were shown with an accompanying commentary by Mr. G. C. Knight, F.R.C.V.S. Once again it was clearly demonstrated that such films are not only of great interest but enable a large audience to follow every detail of an operation in a manner that would be impossible while surgery was actually in progress.

On the social side this Congress was notable for several outstanding events. At the Annual Banquet the Minister of Agriculture and his lady honoured us with their presence —a privilege not accorded to us for a number of years past. Sir Thomas's admirable speech made a great impression, not only because of the high office he holds, but because he is himself a practical farmer and understands at first hand many of the problems with which the profession has to deal in the course of its day-to-day work. The President's reception, as always, provided a most enjoyable evening, its popularity being evidenced by the fact that over 500 members and other guests participated.

Another special social event was the presentation made to Mrs. Simpson, the wife of the founder and the first President of the Ladies' Guild, on the occasion of the memorably successful "coming of age" dance of that body. All members of the B.V.A. will wish to congratulate both the Guild and Mrs. Simpson on the achievement of 21 years of very valuable work.

Among so many matters that give cause for satisfaction, there was one that was somewhat disappointing. This was the large exodus of members on the Friday, producing something of an anticlimax. This had the effect of leaving only a small attendance for the closing meeting, which took place on the Saturday morning. It is worth considering whether, on the last evening of any future Congress, there ought not to be some really attractive social item which will induce delegates to stay the night and appear in full strength to greet their new President for the first time.

This one source of disappointment is, of course, no reflection whatever on the Congress's hosts, the Yorkshire Division. Indeed, from the smoothness of the arrangements, the admirable staff work and the very happy atmosphere that was apparent the whole time, it is incumbent upon the Association to express its very grateful thanks to the Division for all that they did to make this Congress in so delightful a centre as Harrogate, at once so informative, so useful, and so wholly enjoyable.

Bertram Unne, 67, Oxford Street, Harrogate

THE VALLEY GARDENS.

THE WEST PARK STRAY.

ADDRESSES PRESENTED TO CONGRESS

THE ACTIVITIES OF THE FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS IN MATTERS OF ANIMAL HUSBANDRY AND THE CONTROL OF DISEASES OF LIVESTOCK

BY

K. V. L. KESTEVEN

ANIMAL PRODUCTION BRANCH, FAO

The Monday afternoon Address was delivered in the Lounge Hall, Harrogate, Mr. J. N. Ritchie, B.SC., M.R.C.V.S., D.V.S.M., Chief Veterinary Officer, Ministry of Agriculture, in the chair, supported by the President and Junior Vice-President.

The CHAIRMAN: We are privileged to have with us this afternoon Mr. Kesteven of the Food and Agriculture Organisation of the United Nations. He is a graduate of Sydney (New South Wales) University and is now an important figure in FAO. I think we are particularly fortunate to have the opportunity of hearing from one of the officials of an international organisation how their work is carried out in the various countries of the world, for there is little doubt that in these days international co-operation is a very necessary thing not only for improving animal production but for dealing with animal health. (Applause.)

Mr. KEITH KESTEVEN, who was accorded an enthusiastic reception, said: Before I discuss the activities of FAO in the fields of animal health and animal husbandry, it is well that I take a few moments to explain what FAO is, and its place in the United Nations system.

The United Nations itself is a group of 47 nations. It is largely political and its activities are controlled by its governing body, the General Assembly. The General Assembly of the United Nations appoints various committees and councils, the recommendations and resolutions of which are considered and acted on by the General Assembly; examples of these councils appointed by the General Assembly are the Security Council, the Economic and Social Council, etc.

As part of the United Nations system there are various organisations which are referred to as United Nations Agencies; for example, FAO (Food and Agriculture Organisation), WHO (World Health Organisation), ILO (International Labour Office), UNESCO (United Nations Educational, Scientific and Cultural Organisation), etc., which are completely separate and autonomous with their own governing bodies—not part of United Nations, but part of the United Nations system. Resolutions of the United Nations do not bind the agencies until such time as each agency's governing body cares to consider such resolutions. The activities of these agencies and the United Nations are, however, co-ordinated first by reason of the fact that the majority of the countries are represented in the governing bodies of United Nations and the agencies, and secondly by special committees established for the purpose of ensuring that the work of all the agencies is co-ordinated and to avoid any overlapping of their activities.

FAO is a United Nations agency, but the lists of member countries of FAO and United Nations differ quite a lot; for instance, there are 67 countries members of FAO and only 47 in United Nations. Russia and other countries referred to as the Eastern Bloc are not members of FAO; two of them were originally, but they have since withdrawn. FAO is essentially technical and non-political, and according to its constitution was established as follows:—

> The Nations accepting this Constitution
>
> being determined to promote the common welfare by furthering separate and collective action on their part for the purposes of raising levels of nutrition and standards of living of the peoples under their respective jurisdictions,
>
> securing improvements in the efficiency of the production and distribution of all food and agricultural products,
>
> bettering the condition of all rural populations,
>
> and thus contributing toward an expanding world economy,
>
> hereby establish the Food and Agriculture Organisation of the United Nations through which the members will report to one another on the measures taken and the progress achieved in the fields of action set forth above.

Very briefly the organisation of FAO is as follows:—

The governing body is the FAO Conference, at which are represented the member governments. The Director-General with his office is the central co-ordinating unit and establishes policy within the directives given to the Director-General by the Conference.

Below the Director-General's office the Organisation is divided into Services and Technical Divisions. The two Service Divisions are (1) Administrative Services, responsible for what one might term the housekeeping, that is, finance, personnel, etc., and (2) the Information and Education Service, which is responsible for public information, the library, legislation service, etc. The technical work of the Organisation is carried out by five Technical Divisions—Agriculture, Economics, Fisheries, Forestry and Nutrition (Human). Of these five Divisions, Agriculture and Economics are the largest. The respective fields covered by the Technical Divisions are broadly indicated by their titles, and it is with the Agriculture Division that we are mainly concerned. This Division consists of the Divisional Director's office and five branches: Animal Production, Plant Production, Land and Water Use, Agricultural Institutions and Services (not to be confused with the Services mentioned above), and Rural Welfare. Thus at last I have arrived at the branch in which we as a group of veterinarians are interested: the Animal Production Branch.

The Animal Production Branch, of which I am privileged to be Chief, is a comparatively small branch in numbers and in its share of the regular budget, but one of the largest, if not *the* largest, in its activities in the field. At FAO headquarters in Rome, the staff of the branch consists of a chief and a group of specialists in the following more important fields of animal production—Veterinary Science, of which the senior member is Sir Thomas Dalling, whom you all know so well (Applause); Dairy Science, which will be the responsibility of Mr. Anderson, also from U.K.; Animal Breeding, for which Mr. Joshi, of India, is the branch member; in this field, however, we also have Dr. Ralph W. Phillips, Deputy Director of the Agriculture Division, who has contributed a lot to this sphere of activity in the U.S.A. as well as in the international field. Other fields in which we have experts at headquarters are poultry production, zootechny, pasture and range management, and also a post established for animal nutrition which, owing to lack of finances in the regular budget, we

are unable to fill at present. It is not possible for a small group such as this at headquarters to answer all problems and questions sent to us by member governments, nor would it be advisable. The consolidated opinion of a top group is of much greater value than that of an individual. Besides these regular posts at the headquarters we also have a group of consultants on whom we call from time to time to assist the Organisation in carrying out particular tasks. For instance, Douglas H. K. Lee has been appointed on part time with us through arrangement with Johns Hopkins University at Baltimore, U.S.A., to assist us on problems of animal physiology and, in particular, animal climatological studies; Professor Bendixen, of Denmark, who spent one year on our headquarters staff, is appointed as a consultant to assist in the rather large programme we are developing on sterility of livestock. To mention just a few of many others who assist us in the large programme, there are Dr. Stableforth, of Weybridge; Dr. B. T. Sims, Chief of the Bureau of Animal Industry, U.S.D.A.; Dr. Frenkel, of Holland; Dr. Rogan, of Ireland; Dr. Capstick, United Dairies, U.K.; Dr. Kay, of Reading, etc. We frequently appeal to these people for advice in answering questions sent to us by member governments; thus, one of our important functions is to keep in touch with work going on in various parts of the world so as to know where we can obtain the necessary advice when it is requested.

This is a rough thumbnail sketch of the organisation of FAO and its place in the United Nations system, but superimposed on this is another programme which is of great importance to the work of this Organisation. The programme to which I refer is the Expanded Technical Assistance Programme (ETAP). Mr. Truman in his inaugural speech in Washington in 1949 stressed the need for more technical assistance for the lesser-developed countries; this was the fourth point he made in his speech and thus the programme developed in this field by the U.S.A. is known as "the Point Four Programme." Mr. Truman's suggestion was taken up by the United Nations and a meeting of nations was called, not only member nations of United Nations, but all countries which were members of the United Nations or of any of the agencies. This meeting, known as the Technical Assistance Conference, voted a large sum of money to be used by the United Nations and the United Nations agencies to expand the technical work they were already carrying out; FAO because of the programme it already had in operation, and because of the importance of increased food supply, was given the largest share of these funds. These funds have allowed us to expand our programme tremendously in the field, in particular in the Animal Production Branch. With a total budget for the whole of FAO of $5,000,000 a year and less than $100,000 of this for animal production, very little could be done in meeting the requests of governments for technical assistance. FAO's share of the funds voted for technical assistance by the TAC was 29 per cent., somewhere about $6,000,000, and the Animal Production Branch technical assistance programme is approximately 20 per cent. of the total FAO programme.

Work in the Technical Fields

The work to be carried out in the technical fields of the Organisation is established by the charter to which I have already referred. It is extremely broad and must necessarily be limited by the budget. The emphasis to be placed on the work is decided by the member nations at the FAO Conference which gives broad directives to the Director-General to assist him in drawing up the programme of work of the Organisation. In drawing up their programmes of work the technical sections seek the advice of world authorities in the various fields to supplement the knowledge of the staff gained through correspondence, travel, conferences, etc.

The work of the Organisation is essentially that of an advisory service to governments, providing information and advice to assist in increasing production and improving the efficiency of production: without an increase in efficiency of production the standard of living cannot be raised. Although the advice of the Organisation is given to governments, it must be related to the individual farmer in the country, it must be of economic value to the farmer and capable of practical application in the field, and it must be acceptable to the farmers or capable of being sold to the farmers, and this means taking into account technical, economic, social and religious factors.

Keeping all this in mind, the pattern of work in the field of animal production for the improvement of efficiency and the increase in production follows along set lines, modified according to conditions. First, practical economic programmes for the control of animal diseases, because the losses from animal diseases are tremendous. This is a comparatively quick method of increasing both the efficiency and quantity of production; also there is little value in large-scale breeding programmes, improved nutrition schemes, etc., if the animals are likely to be wiped out or made economically useless by some disease or parasitic infection. It must be kept in mind, however, that improved nutrition and management, and in some cases breeding, can be of material assistance in the control of disease and parasites. The line second in importance is the improvement of nutrition and management; this can go along at the same time as the disease control programme, pasture and range management in all its aspects. Improvement through breeding is a long-term programme, so it must be started as early as possible, at least in the pilot stage, keeping in mind that maintenance of animal health must be on a sound basis or the effort and funds invested may be lost.

Answers to the problems in many parts of the world we already have, but there are a great many more we do not have so that the collection of information and the fostering of research is another activity required of the Organisation. It is only a very small part of this work we are able to finance, so that most of this activity depends on the good will and co-operation on the part of various laboratories in the world. We do assist in this in disseminating information and facilitating the exchange of material.

Before I give you details of the work of the Organisation, what has been accomplished and what work is under way, I would like to make just one more general statement, that is, any programme for the increase in efficiency and quantity of animal products must be accepted by the farmers before it will become effective. Farmers the world over are the same—sound, solid citizens, complaining of the weather, discussing markets and crops, suspicious of talk, but very quick to grasp the significance of demonstrated techniques of value. For this very reason, as you all know, programmes must be sound in the eyes of the farmer; they must improve his efficiency and economy and they are naturally going to be slow to develop. This is not meant as an excuse for the inadequacy or slowness of our work, but rather an appeal to understand that these programmes must be slow, particularly as most of them are being carried

out in the lesser-developed countries. It is only necessary for you to consider some of your own programmes in the U.K. and the time it has taken to develop them, then to consider the difficulties in a country with but a fraction of the educational standard and facilities of communication.

Veterinary Science

What has FAO done and what is it doing in the field of veterinary science? In view of the potential, I would say, very little, yet this one small branch of one of the five Divisions of FAO has been responsible (as with most other fields of activity in FAO) for an increase in animal products in the world annually worth many times the total budget of FAO.

When FAO was first formed, the problem was, where do we start on animal production, what can be done to make the greatest contribution to increase production keeping in mind the very limited budget available? The answer was not difficult—the control of rinderpest. It was responsible for the death of probably more than a million head of cattle each year; this in itself was a serious loss, but perhaps more important still was the loss of draught power and thus a loss of essential cereal crops, etc. As far back as 1946 a group of us were working on this problem in China, where the war had reduced the number of livestock so that an outbreak of rinderpest in some cases resulted in a famine area, due solely to the lack of power to till the land for crop production. Both serum and the inactivated tissue vaccine were in short supply; there were not the animals available for their production and they were too costly for the economy of the farmer. We had the goat vaccine, but the farmers would not let us use it, because their animals were highly susceptible, the mortality rate following its use being as high as 2 per cent. in some areas. We were given the answer for a time by receiving a large supply of the avianised vaccine produced at Grosse Isle during the war. We tried to produce the avianised vaccine in China, but failed to adapt the virus to eggs for quite some time. By the time we had solved the problem of adaptation, the supply of the Grosse Isle vaccine had run out, and we had to find a substitute to fill the gap until we could get into production. We had been working on the lapinised virus with the Chinese for some time and this provided the answer. It was cheap and easy to produce as a practical vaccine for field use for highly susceptible cattle. It gave us a practical answer which was acceptable to the farmer. We were able to demonstrate its value also in Thailand, where its use was just the added assistance required for the virtual eradication of the disease from that country (there has been one minor outbreak which was immediately controlled in the last three years). FAO then called an international meeting of all interested countries to discuss the latest developments in the field of the production of vaccines for the control of rinderpest. The information presented by many authorities at this meeting is recorded in an FAO publication. To-day, FAO has 15 veterinarians working in six countries assisting them in their programmes for the eradication of rinderpest. Probably the most interesting of these programmes is in Ethiopia, where the work has been going on longer than elsewhere (we are no longer assisting in China). Rinderpest has been pushed out of South and East Africa on various occasions, only to be reintroduced from Ethiopia; the disease is also said to be carried along the caravan routes from Ethiopia to the West. If this is true it means that Africa cannot be cleared of the disease until Ethiopia is cleared; in any case its presence

Graham Powell, 35, James Street, Harrogate.

Mr. Keith Kesteven (F.A.O.) addressing Congress, with Mr. J. N. Ritchie (Chief Veterinary Officer) in the chair.

in Ethiopia is certainly a source of danger to the rest of Africa and must result in the limitation of the export of meat from Africa to regions free of the disease. FAO has had a team working there since the end of 1947. In the first year, practically nothing was accomplished; in the second year 20,000 animals were vaccinated, in the third year 120,000 and last year close to 1,000,000. This year the figure will be only about the same, due to various administrative difficulties in Ethiopia. This is far from an effective eradication scheme when one considers that there are probably more than 16,000,000 head of cattle in Ethiopia, but it is at least a start and it is hoped and expected that eventually it will develop into an effective eradication programme. In the other countries in which we are working on rinderpest eradication, although the work started later, it is expected progress will be made at a much faster rate.

Newcastle disease is another disease of great economic importance. In many areas (in the Far East in particular) poultry is the main source of animal protein for the human population, yet only a few hens are kept by each farmer. There are very few poultry farms, mainly because it is economically unsound, the presence of the virulent form of Newcastle disease in the area frequently causing a mortality rate of more than 99 per cent. Suitable live virus vaccines for use in any area are easily and cheaply produced. FAO has given assistance to many countries in the production of this vaccine and has, at the present time, veterinarians in five countries giving assistance in this work. In some of these countries the poultry industry is expanding at a very fast rate and FAO has four poultry experts in the field to assist them in the development of the industry.

The Organisation has been giving attention to foot-and-mouth disease for some time. This disease, like rinderpest, needs to be handled on a regional basis. In the Far East, rinderpest is the more important problem in most countries and it is considered, both by the countries in the area and by FAO, that in view of the shortage of personnel and funds it is best to concentrate on rinderpest in these countries for the time being. FAO in co-operation with U.S.A. Point Four, is giving assistance in Indonesia (where there is no rinderpest) in the setting-up of a vaccine-producing unit and diagnosis centre for foot-and-mouth disease. This will serve as a pilot scheme for the Far East. In South America FAO is co-operating with the Organisation of

American States, who are establishing a diagnostic and research centre for foot-and-mouth in Brazil, and we have veterinarians working in some of the South American countries co-ordinating this work with the centre in Brazil. In Central America FAO has provided two veterinarians to assist the Central American countries to develop and co-ordinate their quarantine measures and to train personnel in the diagnosis and control of foot-and-mouth disease, essentially with the idea of strengthening the machinery to keep this area free of the disease. FAO also has at the present time four other veterinarians in this area to assist governments in setting up and improving the veterinary services.

In Europe FAO had until recently done very little in this field as it was felt by some of the European countries that this problem was already being handled by the OIE, and it has handled this problem, for if the technical advice of the OIE had been followed, it is unlikely that such an outbreak as has occurred in the last 18 months would have spread. What is required, however, is an operational programme which will commit the governments to put into effect a practical economic programme to control the disease. As veterinarians I am sure we would all agree that this is possible and the cost would be on an annual basis a small premium for such an insurance. The FAO Conference has at various times requested the Organisation to take a more active part in this work in Europe.

Recently FAO has received from three European countries requests for assistance under the ETAP (Expanded Technical Assistance Programme) to help control this disease and work has already started in these countries. Next week, an FAO meeting will be held in Copenhagen to consider a co-ordinated co-operative plan for the control of foot-and-mouth disease in Europe. It is hoped that machinery will be established to prevent such widespread outbreaks as have occurred in the last 18 months.

Those are the more important items of our animal disease control programme, but the activities are not limited to them. At the present time we have, or will have very soon, in the field 56 veterinarians in 24 countries and we have received requests for a further 20.

The poultry programme I have already mentioned, but there is one further point I would like to add, *viz.*, that any programme in the field of animal production must be considered not only in the light of what is technically possible, but also as part of the overall economic development of a country, particularly in the agriculture field. The poultry industry is an example of this because, while it might be comparatively simple to increase the poultry industry, such an increase might place the poultry industry in competition with the human population for cereal and other grains so that the end result would be detrimental to the nutrition level of the country as a whole.

In the work on dairy production, little help is needed from us in the more developed countries other than assisting already-established dairy organisations such as the International Dairy Federation (IDF). Most of our work is in the tropics and here there are special problems requiring not only the attention of a dairy expert, but also experts on nutrition, breeding, physiology and the processing and handling of milk, etc. Each member of this team must keep in mind that the industry must develop along sound economic lines if it is to survive and expand to meet the nutrition requirements of the human population.

Work on range and pasture management is a long-term programme, but of tremendous importance when one considers the size and potential of the grasslands of the world. While it is important to stop losses from animal diseases—and there is little value in improving the animal nutrition if they are to be lost as a result of an outbreak of an epizootic—the converse is also true. There is little value in saving animals from disease if there is no feed to maintain them. Again to maintain healthy animals they must be on a suitable plane of nutrition. Improvement in animal breeding methods also depends on a proper nutrition of the animals. We have, at the present time, eight experts working in eight countries. Besides this the Organisation is in constant communication with workers in many parts of the world and facilitates the exchange of information and of seeds and plants which may be of value.

Although FAO assists and takes an active part in meetings and conferences on animal breeding, the emphasis in the Organisation has been in the field of collecting and collating information on breeds of animals adaptable to what are considered unfavourable environments, including the tropics. The Organisation has distributed various publications in this field, and is giving assistance to seven countries to assist them in the development of improved breeding of their livestock.

Finally, before closing, I would like to mention veterinary education. "Animal health" in its broadest sense is the responsibility of the veterinarian and this should form the basis of veterinary education. Many of the veterinary schools in the world to-day are turning out groups of young men who are trained to cure sick animals, diagnose the diseases in the field and in the laboratory and some to do research work in the laboratory. Very few are given training in all the aspects of animal production which they must understand if they are to be responsible for animal health. Still fewer in numbers are those trained in the economic aspects of animal production, yet probably more than 95 per cent. of the work of the veterinarian is dependent on its economic value to the farmer. There is need for the specialist, and with the increase in knowledge in each particular field it becomes more and more impossible for one individual to be fully conversant with all subjects. There is, however, a serious need for each of the specialists to realise the activities and importance of each of the other fields of work and to relate his activities to assist workers in other fields, both veterinary and agriculture, in general.

There is also a serious need for the individual with a sound basic training in all aspects of animal health and production to co-ordinate the activities, lead and advise the specialists in their activities, so that the greatest value can be obtained from their work towards increasing animal production and efficiency of production to raise the standards of living of the peoples of the world.

With millions in the world to-day undernourished, particularly in regard to intake of animal proteins, a very heavy responsibility lies with the Veterinary Services. (Loud applause.)

The CHAIRMAN: We have had a very interesting and instructive address from Mr. Kesteven and it remains for me only to propose a very hearty vote of thanks to him. I will call upon Mr. Graham to second the proposal.

Mr. A. M. GRAHAM (Junior Vice-President): I have great pleasure in seconding the vote of thanks which Mr. Ritchie has proposed. Mr. Kesteven has given us a most interesting and informative address and we are most grateful to him. I think, however, that occasionally even he must feel daunted by the vast number of problems which lie ahead of the FAO, although I am quite sure many of them will be solved eventually.

I was particularly interested in the work of his own department, the Animal Production Branch. There are great possibilities for this branch although it also has an enormous number of varied problems to face. I am thinking particularly of one with which we in this country are especially concerned at the moment, namely, foot-and-mouth disease. If the Animal Production Branch can succeed in introducing effective control measures for this disease on an international scale it will have achieved a great triumph for the veterinary profession and great benefits for the world at large.

The vote of thanks was carried with applause and the session concluded.

Talk on Foot-and-Mouth Disease

(A. M. GRAHAM, M.R.C.V.S.)

For this session in the Lounge Hall, Harrogate, on the afternoon of Tuesday, September 9th, 1952, the chair was taken by Mr. W. R. McKinna, M.R.C.V.S., D.V.S.M., of Huddersfield.

The CHAIRMAN opened the proceedings by saying that it was a happy thought on the part of the officers of the Association to arrange for an informal talk on foot-and-mouth disease. The country had suffered a large number of widespread and devastating outbreaks of this disease which had caused the profession great concern and the agricultural community not only concern but grievous loss. The public mind had been stirred by these numerous outbreaks and this had been ventilated in the Press and Parliament to the extent that a Commission had been appointed by the Government to go into the whole question of foot-and-mouth disease, its incidence and whether the policy of slaughter should be changed. That did not come into consideration that afternoon, but members would appreciate the opportunity of hearing of the cause and difficulties and diagnosis of foot-and-mouth disease in the field.

He had been asked to stress that this was not a formal paper, but an informal talk. They had greatly admired the way in which the veterinary officers of the Ministry had set about their arduous task of controlling so many outbreaks. They had earned in no small degree the very high regard of the rest of the profession and the agricultural community at large. Mr. Graham did not need any introduction. He was the President-elect, and a Superintending Veterinary Officer at the Ministry of Agriculture. There was no one better informed or more capable of giving this talk.

Mr. GRAHAM then delivered his Address. This dealt exhaustively with the procedure which should be adopted when a veterinary surgeon is called to a suspected case. It was emphasised that, while unusual manifestations of the disease in individual animals have been observed in some early cases, the picture in the great majority of outbreaks was as shown in the text-books. In emphasising the importance of early suspicion by the stock-owner and practising veterinary surgeon, who remain the first line of defence against the disease under any circumstances, Mr. Graham gave a number of valuable hints to members of the profession on conditions which might arouse early suspicion. The whole subject was dealt with in the straightforward manner to be expected from one who has been many years at Pirbright, and who has also had a wide and varied experience in the field, during the major outbreak of the past few months.

Mr. W. TWEED, the first contributor to the discussion, drew a picture of the extensive outbreak in his district during this year, and from this described a number of situations which had occurred, which emphasised the necessity of early suspicion. The discussion was carried on and questions were asked by a number of those present, including Messrs. G. M. G. Oliver, P. D. Dunn and George Eaton.

After Mr. Graham's reply he demonstrated, with the assistance of other members of the Animal Health Division, a number of excellent specimens showing lesions of the disease, prepared by the Ministry of Agriculture and Fisheries.

This informal talk was well attended and very well received by all present, and the vote of thanks to Mr. Graham was carried by acclamation.

PAPERS PRESENTED TO CONGRESS

In this issue, in addition to the addresses published on earlier pages, we reproduce the first and second of the papers presented to Congress, together with the discussions upon them. Next week's issue will contain the succeeding paper on "Feline Enteritis," by Dr. A. W. Gledhill, B.A., M.R.C.V.S., of Mill Hill, together with a report of the discussion, opened by Miss W. M. Brancker, M.R.C.V.S., of Sutton Coldfield. The following papers and discussions will appear in successive numbers: "Q Fever: The Domestic Animal as a Source of Infection for Man," by Dr. G. Slavin, M.R.C.V.S., Senior Research Officer, Ministry of Agriculture, Weybridge (opener of discussion, Dr. H. T. Findlay, Public Health Laboratory Service, Wakefield); "*Vibrio foetus* Infection in Cattle," by Mr. J. R. Lawson, M.R.C.V.S., and Mr. D. J. MacKinnon, B.SC., M.R.C.V.S., Research Officers, Ministry of Agriculture, Weybridge (opener of discussion, Mr. G. Seaton Powley, M.R.C.V.S., of Wetherby), and "Modern Insecticides and Ectoparasite Control," by Messrs. W. Downing, F.R.C.V.S., H. E. Harbour, B.A., M.R.C.V.S., and L. C. Stones, B.A., M.R.C.V.S., of the Cooper Technical Bureau (opener, Mr. I. W. Montgomery, B.V.SC. (SYD.), I.C.I. of Australia and New Zealand).

No. 1.—THE TECHNICAL AND PRACTICAL APPLICATION OF ELECTRO-THERAPY IN EQUINES*

BY

NORMAN GOLD, M.R.C.V.S.,
REDDITCH

The Royal Hall at Harrogate, large as is this theatre, was well filled on the morning of Tuesday, September 9th, 1952, for the morning session, the whole of which was devoted to the consideration of Mr. Norman Gold's paper. Mr. J. W. Procter, M.R.C.V.S., of York, was in the chair, with Mr. A. J. Adams, B.SC., M.R.C.V.S., of Bradford, as Recording Secretary.

Mr. Gold's paper was as follows:

This covers a very extensive field and includes ultra-violet and infra-red irradiations, diathermy, and the use of the short-wave inductotherm: it is particularly on this latter subject that I wish to speak. Firstly, it may be an advantage to explain very briefly the technical side of the production of short-wave radiation.

* Presented to the 70th Annual Meeting of the British Veterinary Association, at Harrogate, on September 9th, 1952.

The employment of high-frequency currents, having a frequency sufficiently high to avoid any neuromuscular response, to produce local or general hyperaemia with its resultant beneficial effects, has been practised for many years. Early workers employed generators producing currents having a frequency of about 1 kilocycle per second but modern techniques are generally based on the use of much higher frequencies of between 10 and 50 megacycles per second. In all cases some form of radio oscillator is the source of current and the design of these generators has not unnaturally followed the trend of current radio practice.

Inductothermy may be defined as the heating of tissues for therapeutic purposes by the induction therein of high-frequency electric currents. The equipment employed, the inductotherm, is a valve-type radio oscillator generating a current with a frequency of about 12 megacycles per second—corresponding to a wavelength of 25 metres. The current produced by the inductotherm is not passed directly through the tissues, but through a well-insulated cable which is coiled around or placed adjacent to that region of the patient being treated. An alternating magnetic flux, having the same frequency as the current in the coil, is set up around the cable and if a conductive material is placed within the coil an electromotive force will be induced in it. This induced voltage will cause eddy currents to flow in the material, resulting in the production of heat within it.

If living tissue is placed in this high-frequency magnetic field from the inductotherm there will be no neuromuscular response to the eddy currents produced in the tissues because the frequency of these currents—12 to 15 megacycles per second—is far above the frequencies which elicit muscular contraction. The intensity of the induced currents will be greater in the more conductive tissues and therefore the generation of heat per unit time will be greater in the more conductive tissues, *i.e.*, the vascular tissues, than in those of lesser conductivity—the fatty and bony tissues. The electrical conductivity of muscular tissues is about five times that of adipose tissue or bone. It must be emphasised that the heating takes place within the tissues directly and inductothermy should not be confused with any procedure involving the external application of heat—such as infra-red treatment—where the penetration is never more than a few millimetres.

Results obtained by several independent investigators have shown that inductothermy provides one of the most effective methods of producing heat in living tissues. Not only is the technique of application considerably simpler than is the case with other methods of applying high-frequency currents to the living body, but because of the selective heating resulting from the use of inductothermy whereby the heat production is the greatest in the vascular tissues, the therapeutic results obtained are better, with less discomfort to the patient and therefore greater tolerance than with other forms of diathermy.

The clinical applications of inductothermy are based on the physiological effects which are solely those associated with a local or more general rise in temperature. No evidence has been presented to support the contention of some workers that the therapeutic effects are in any way influenced by the particular frequency of the current employed unless this results in a more efficient production of heat.

Since it is an accepted physiological fact that hyperaemia is one of the main factors in the repair of strained or lacerated muscles, tendons, or ligaments, it was thought some years ago that here was a means of assisting the repair of such structures free from the unnecessary pain and suffering engendered by the use of counter irritants, or actual cautery and counter irritants; moreover, one in which hyperaemia was produced in the acknowledged relatively avascular structures, such as tendons or ligaments, whereas the counter irritants and actual cautery merely produce hyperaemia of the cutaneous tissues and no deeper. As the late Professor James MacQueen said in his surgery lectures on "Line Firing for Strained Tendons" . . . "It would appear the apparently beneficial effects from this treatment are the result of the prolonged rest it ensures."

No one will ever convince me that scar tissue, however prettily delineated, consisting of some 12, 15 or perhaps 20 lines covering the posterior aspect of the metacarpal region, can give any support to the tendons or ligaments in this area. It must be remembered that in racing over the sticks the horse weighs probably 1,000 lb., carries some 12 stone, gallops at a speed in the region of 30 m.p.h., and has to land on one forelimb after clearing perhaps a 5-foot fence. It cannot be believed that cutaneous scars could make one iota of difference to the strain which has to be carried by the tendons and ligaments of this forelimb.

Perhaps it will simplify matters if we take the simple strain of the perforans tendon in the middle third of the metacarpal region. The usual history is that an animal racing, hunting, or at exercise is noticed to be lame, and within a very short time there is a swelling, heat and pain in the region of the damaged tendon. The immediate treatment consists in the application of warm kaolin poultices; this is repeated at 24-hourly intervals until the animal is able to walk sound: this may take a few days, or perhaps in severe cases two to three weeks. When lameness at the walk has disappeared the short-wave inductotherm is employed. This consists of placing the coils of the inductotherm around the affected limb if the animal is a particularly quiet one; if this is not possible, the coil should be placed near to the affected limb. The machine is run for half an hour twice daily, in the morning after exercise, and again in the evening: the exercise should be commenced as soon as the animal is walking sound. The exercise at first should be as a led horse, but within a matter of days the animal should be ridden at a walk. When it is able to trot soundly it may be walked and trotted. At no time during the first six weeks is any fast work (cantering or galloping) permitted. This exercise should commence at some 20 minutes to half an hour, and be gradually increased up to two hours per day. The animal is exercised without bandages, and upon returning the inductotherm is applied. On no account should the animal be treated and turned out in the fields where it will gallop about.

Controlled exercise appears to be a major factor in restoring the damaged tissue to as near normal as possible. At the end of some six to eight weeks' treatment, the duration of which obviously depends upon the degree of damage inflicted in the first instance, the animal may be given faster work, commencing with cantering. Cantering should not be given if, on palpation, the tendon and surrounding structures appear to be oedematous. If this oedema persists further treatment should be given, with no fast work.

In a small percentage of tendon strains there is no doubt the strain is preceded by degenerative changes in the nerve trunk supplying the area; such cases obviously cannot be benefited by any treatment. Unfortunately, at the moment, it is not possible accurately to determine these nerve changes *ante-mortem*.

The question one asks is, what are the results of this line of treatment compared with the results following actual cautery? When one keeps records of animals subjected to line firing, it is found at a later date they make extremely miserable reading. It is not suggested for a moment that short-wave inductothermy is the simple answer to all tendon strains, but after carrying out this treatment on some hundreds of animals, some of which had broken down after previous line firing, I am convinced the treatment is far ahead of the

older methods. Its results vary according to the methods employed by the people in charge of the horses ; in some cases the results are highly satisfactory, in others poor : this appears to depend on whether or not the policy of controlled exercise is carried out.

Two examples of ligament strains may be cited ; firstly, strain of the so-called suspensory ligament. In this case strain may occur in the inner or outer branch of the ligament immediately above its insertion into the corresponding sesamoid bone or in the body of the ligament, resulting in the condition known as dilaceration. At either site the treatment is the same as in the case of strained tendons, except that in this case lameness usually is less marked than in tendon strain and generally controlled exercise may be commenced earlier. The second case of ligament strain is that of the calcaneo metatarsal-ligament, resulting in the production of what is popularly known as a " curb." Too frequently one sees young animals which have been marked for life by the application of actual cautery as a means of treatment of this condition. The application of short-wave inductothermy in these cases has, in many instances, resulted in complete resolution ; here again only controlled slow exercise is permitted.

In the case of muscular strain or lacerations, most commonly encountered in the hind limbs or lumbar region, the application of inductothermy for periods of half an hour twice daily gives very beneficial results ; as in the case of strained tendons, this is combined with controlled exercise.

There is no external application which can have anything approaching the penetrative power of short-wave inductothermy in these cases, and usually the results are good. To generalise is difficult and often inaccurate, but if the fundamental facts of technique are remembered and applied to the specific injury, and controlled exercise is enforced, the operator will be satisfied with the results.

I wish to acknowledge the technical advice and encouragement I have received from Mr. G. F. Gribbin, B.Sc., A.M.I.E.E., and Mr. R. W. Armstrong.

The CHAIRMAN: The paper this morning is by Mr. Norman Gold, and Dr. Fraser is to open the discussion. Mr. Gold does not wish to elaborate his paper in any way and I will call upon Dr. Fraser at once.

Discussion

Dr. A. C. FRASER, B.V.Sc., M.R.C.V.S. (Lambourn): I welcome this opportunity of acclaiming Mr. Gold as a pioneer. His introduction of the inductotherm to the veterinary field created something of a sensation in hunting and racing circles and " Gold's treatment " has been adopted as the simple name for treatment by the inductotherm in the same way that " Hobdaying " is used as an abbreviation for laryngeal ventriculectomy. I must also congratulate Mr. Gold on the clarity and precision of his paper. He states clearly what he has done, what results he has obtained and what conclusions he has drawn and though I disagree with some of these, I hope he and you all will appreciate that my objections to his conclusions are put forward in the spirit of healthy debate and in the realisation that there are so many variable factors associated with strained tendons and their treatment that true comparison of one case against another or even one large group of cases against another large group is really quite out of the question. I maintain that firing is satisfactory and I base my claims on results—so does Mr. Gold base his claims on results, so we are both on reasonably sound ground from which to argue!

I have been looking for an alternative treatment to firing for very many years because I know very well that there is a great deal of truth in many of the arguments put forward by the opponents of firing as a means of treating horses. On the other hand, I am quite convinced that there is no treatment for a severely strained tendon which will give such satisfactory results as firing and blistering, and by satisfactory results I mean enabling the animal to be returned to the severe strain of training and then racing. The inductotherm may be useful in minor cases but it is no substitute for firing. I feel that the main difficulty in discussing the relative values of various methods of treatment is in the extreme range of lesions known as " strained tendons," because the term is applied by racing people to anything from scarcely detectable heat in the tendon to a case in which the tendons are almost completely ruptured so that the fetlock joint is on the ground. I feel that I must digress a little to discuss what happens in a severe case of tendon strain. In Professor Wooldridge's words, the damage consists of the three stages of infiltration, separation and disintegration and this neat summary is dramatically revealed on cutting into a damaged tendon on *post-mortem* examination when the processes of infiltration and separation are almost always found to be much more advanced than would be expected from an external and manual examination of the part. Infiltration and separation weaken the tendon and when by some means the fluids are driven out of the tissues so that the separated fibrils can once again lie close to each other, then the tendon has regained its strength, and as long as it can be kept in this state of comparative dryness it is capable of standing up to work. Put very briefly, the strength of a tendon depends on its dryness and any infiltrating moisture immediately weakens it.

A further point of importance in regard to tendon strain and recovery is the fact that a tendon which has been strained and has recovered is thicker than the original tendon. This point is also vividly demonstrated on *post-mortem* examination and once more is much more striking than appears on external and manual examination. This increase in the diameter of a tendon is even more marked in the case of a tendon which has been fired and it is this striking increase in the thickness of the tendon, and not the scarring of the skin, which is the objective of the firing operation. It is really immaterial whether line firing, budding or pin firing are used, the extreme inflammation following any of these methods causes the eventual laying down of extra fibrous tissue which adds to the bulk of the tendon and, as I think, to its strength. The more severe the inflammation caused the longer is the period necessary to wait for the inflammation to subside, which means the drying up of the tendon and the removal of all infiltrating fluids with consequent dryness and strength, since I believe that a dry tendon is a strong tendon. The more severe the inflammatory process caused the less likely is there to be a recurrence of minor inflammations with infiltration and consequently weakness.

The long waiting period which is necessary for complete resolution after firing is a great disadvantage as firing takes a year out of a horse's racing life and the racing life of a horse is not a very long one. The waiting period is also expensive to the owner and means that the long and tedious process of training the horse to fitness for racing must again be gone through from the start. Opponents of firing frequently argue, as Mr. Gold has done, that the long waiting period is the only advantage to the horse and that veterinary surgeons advise firing because this is the only way that they can ensure that the owner will keep the horse out of training for 12 months. Now I agree that in a great many cases a severely strained tendon will return to an apparently normal condition after 12 months' rest, but I do not agree that horses put by in this way for 12 months will stand up to the hard work of training and racing without the definite likelihood that they will break down again, whereas those horses which have been fired and then rested for a long period are likely to remain capable of racing. Some years ago I spent a long time delving into the subsequent career of 31 consecutive cases of horses that I had fired. Eighty per cent. of these cases were considered successful in that they were returned to training and raced throughout a whole season and 11 of the 31 won races in that first season. I consider that these figures justify the assumption that firing is a satisfactory treatment and I have good reason to suppose that we are obtaining approximately as good results in these days.

The value of rest without firing was very thoroughly discussed in an article in *The Veterinary Record* in March, 1941, by Sir Arthur Olver in which he describes his treatment of 120 cases of chronic tendon lameness which had not responded to many months of idleness but of which the majority returned to work after he had fired them and given them a further period of rest. Single cases obviously do not carry as much weight as these mass production figures just referred to, but I have in mind a horse called Anchors Aweigh, which broke down severely three years ago and was rested for over a year. On return to training his tendons immediately inflamed again and I advised firing. The owner expressed considerable annoyance in that he had put the horse by for over a year on veterinary advice and was now being advised that the treatment suggested would involve another 12 months' delay. After some discussion and a consultation the animal was fired and was rested a further 12 months and won two races in his first season back in training. This case is typical of many that we have dealt with and while I have no doubt that the extremely long resting period is advantageous I am quite sure the firing operation is the essential item.

The treatment of minor strains in which there is a certain amount of infiltration and separation is a very serious problem to us and I think it is in these cases that the inductotherm should be useful, but there are so many ways in which these cases can be dealt with and it is so difficult to assess the merits of various treatments that I find it difficult to convince myself that the inductotherm is more useful than a daily dressing of stockholm tar and iodine or even bandaging with elastoplast. Colonel Hickman has shown in his article in the *British Racehorse* that the inductotherm does raise the temperature in the leg and possibly the results obtained from this treatment are more satisfactory and lasting than results obtained in other ways. Where I am entirely in agreement with Mr. Gold is in the management of these cases. The amount of rest and exercise, the question of feeding and the general management of the cases is of tremendous importance and may be a deciding factor in the vital question of whether the case clears up and becomes dry or relapses periodically into a case of chronic strain.

Mr. Gold is a pioneer in more ways than one. The inductotherm is not the only new weapon in his well-stocked armoury. When he first brought his inductotherm into our part of the country he was using in combination with it a paste to enhance the effects of the inductotherm. I was most interested in this paste and having been assured by my colleagues that it was one part of barium sulphide with three parts of a bland powder I prepared a mixture of BaS and fuller's earth 1:3 and have been using it in the treatment of various conditions with somewhat spectacular results. I would be very grateful if Mr. Gold would tell us of his experiences with *his* paste and whether he is still using it in conjunction with the electrical treatment. My results seem to show that while the inductotherm brings about its effects by inflammation, a process we all clearly understand, the paste obtains its effects by a completely opposite effect: by directly and immediately reducing inflammation, driving out fluids and strengthening the part by the removal of infiltration with subsequent comparative dryness. The paste appears to act by contracting the skin and possibly underlying tissues and is very effective in cases where tension is an advantage; for instance, in cases such as slipped stifle or shot fetlock joints where a slackness or lack of tissue tension on the part of the animal is a contributory factor to the condition.

I have also obtained satisfactory results in the treatment of some bone conditions with this paste. Applied for 10 or 12 minutes to a recent splint or to sore shins it appears to have the double effect of relieving pain, thereby enabling the animal to go sound, and of hastening the repair process; reducing the splint considerably in size or driving away the inflammation from the shin. It can be applied with advantage to bog spavins, thoroughpins and even to curbs and enlargements of the bones of the knee. I know this sounds like an extract from the wrapping off a bottle of patent medicine, but I have had successful results after its use in an extraordinary variety of cases and especially in checking the inflammation occurring in or giving notice of strained tendons, that I am really far more interested in Mr. Gold's paste (if his paste is similar to the one I have been using) than I am in the inductotherm. I feel that we understand fairly thoroughly how the inductotherm works and I consider its uses for strained tendons to be limited to early cases of inflammation or recent mild strains, but I am very anxious to hear Mr. Gold's experiences with the paste and if he still uses it in combination with the inductotherm and if he considers that the two can be desirably used in conjunction. This paste to me is a much more revolutionary advance in veterinary practice and I find it very difficult to explain many of the satisfactory results I have obtained after its use. It will be most interesting to all of us to hear from Mr. Gold of his experiences with it and of the range of cases for which he considers it to be useful.

To revert to the electrical treatment of horses I expect many of you will have noticed Mr. Strong's advertisement in *The Veterinary Record* referring to the application of faradism to horses. I was fortunate enough to have the opportunity of seeing Mr. Strong demonstrate his apparatus which is designed to bring about the rhythmical contraction and relaxation of groups of muscles by passing faradic impulses between two terminals on the body of the horse. One terminal is applied through a square of chain mesh applied over a large pad of wool soaked in saline held on the animal's back by a roller and surcingle. The other terminal is held in the hand and consists of a small hard sponge soaked in a tragacanth emulsion. The strength and frequency of the impulses are controlled within a safe range from a 12 volt battery. On applying the hand terminal over various parts of the body and limbs of the horse a certain number of impulse points may be located and while the pad is applied firmly on one or other of these points, muscle groups in the area are set into a state of slow rhythmical contraction and relaxation. The phenomenon is striking in several ways. So clearly do the individual muscles and muscle groups become activated that the first impulse of any veterinary surgeon is to reach for Sisson's "Anatomy" to refresh his memory. The horse remains quite passive. Even fidgety thoroughbreds do not appear to know that anything unusual is happening and yet the muscles may contract so strongly that the animal's hind quarters are actively moving and by increasing the stimuli one has the impression of nearly lifting the animal off the ground. The application of this treatment is in the breaking down of adhesions and for the advantages that may be obtained by the stimulation of muscles suffering from some forms of paralysis and for the other advantages which may accrue from improved circulation in certain areas. I do not feel myself that the apparatus has a very wide application in the treatment of equines though I have no doubt that it can be most effective in certain selected cases and Mr. Strong tells me that the method has been successful in bringing about cures in many cases of chronic and other lameness.

I have mentioned this apparatus partly because we are discussing this afternoon the application of electricity to horses, partly because though I have tried to apply faradism to horses in cases of paralysis I have never been able to eliminate the shock which seems unavoidable in other types of faradic machine, whereas Mr. Strong's tackle appears to be absolutely proof against this risk. A further reason for mentioning the apparatus is that it has not been found to be satisfactory for the treatment of tendons so that once again those of us who are looking for a substitute for the firing iron have been disappointed.

In conclusion I would like to thank the organisers of the Congress for giving me this opportunity of commenting on Mr. Gold's paper, to thank you all for your interest in the subject shown by your attendance here in such large numbers, and to thank Mr. Gold for his unusual paper and to assure him that we are all looking forward to his further remarks and experiences with this form of treatment as applied to horses.

GENERAL DISCUSSION

Brigadier E. S. W. PEATT (Ashford, Kent) said that he felt diffident in taking part in the discussion because he had no experience of the inductotherm in the treatment of strained tendons; however, he had a great deal of experience of other forms of treatment such as those referred to by Dr. Fraser. As Dr. Fraser said, it was practically impossible to compare the different forms of treatment for strained tendons because there was no fixed basis on which to work, but whatever method was

used he was sure that the greatest importance should be placed on the after-treatment. He thought that Mr. Gold's description of controlled exercise was probably of more importance than the actual form of treatment used.

He had treated such cases for many years by firing, blistering, acid firing and by rest and a pressure bandage. In his experience whatever the form of treatment might be, it was essential for recovery that a long period of walking exercise only should be given, started as soon as the horse was walking sound. On no account should the animal be turned out to grass too soon as a second breakdown often followed. What he did was to start walking exercise in increasing amounts and then, if possible, turn the horse into a fairly large enclosure, like a barn, and keep him there for weeks and months until he was sure that the repair of the tendon was complete, and then beginning with a walk and passing on to a trot and later to cantering, so getting the horse gradually fit. He thought it was William Hunting who never fired horses but based his treatment on rest.

If one could imagine five exactly similar types of strained tendon, treating four, one by firing with a hot iron, one by acid firing, one by blistering, and one by the inductotherm, keeping the fifth as a control, and provided the after-treatment was that prescribed, in a year's time there would not be very much difference in the results. In other words, he thought that the great thing about the treatment of strained tendons was the rest. Undoubtedly firing did good, although he had never heard anybody explain exactly why. The first time he had heard the theory of the increased tissue produced by irradiation was when Dr. Fraser had spoken that morning; it was probably quite a good idea. It was difficult to understand why firing the outside of a horse's leg should have a marked effect on a tendon situated in its depth.

He would like to ask Mr. Gold one question. In his paper he recommended controlled exercise but he seemed to insist on the horse being ridden after a short time and he wondered whether there was any particular point in that, whether it had some effect which he could not quite understand.

Like Dr. Fraser he had heard of Mr. Gold's famous paste but unlike him he had never discovered what was in it, so he waited with greater expectation than ever to hear what Mr. Gold said about it.

He would congratulate him on an interesting paper—on a subject very difficult to put on paper.

Colonel C. H. S. Townsend (Lechlade) thought it would be agreed that if an alternative to treating strained tendons by firing could be found everyone would be in sympathy with it. He had not tried Mr. Gold's treatment but he had seen the results of it and without being derogatory in any way he was not happy about those results. In the stables with which he was connected all the trainers had tried it and did not use it any more. He had a great opinion of a trainer's knowledge of tendons. Anyone who had been a trainer for a long time had of necessity to know when a tendon required attention and what treatment had proved to be the most effective, and in the latter he was as good a judge as his veterinary surgeon—in other words they were the best judges of what did or did not give the best results, and those he was connected with had decided against the electrical treatment.

The next point was the economics of the treatment. Mr. Gold recommended treatment twice a day for some considerable length of time; did he mean that this must be carried out by the veterinary surgeon or the trainer? If by the veterinary surgeon it meant that he had to go, or send somebody, perhaps some miles every day to give this treatment. Would the value of the animal stand this? Except in a very few cases it was not so. The alternative was for the horse to go to the veterinary surgeon and very few veterinary surgeons had the necessary facilities. If the horse could be treated without this expense to the owner and the time required from the veterinary surgeon it should be done.

He never allowed a horse which had been fired to be turned out; he used to do so but bad results ensued and he now insisted that the horse remained in a loose-box or better still a bedded down yard for two or three months or even more following firing. He knew one veterinary surgeon who did a lot of racing work who kept his horses for six months in a big box following a breakdown and he got as good results as, or even better than, many other people.

In his paper Mr. Gold referred to curbs and recommended this electrical therapy for the treatment of curbs, presumably in young animals; it was often young animals who got curbs. It struck him that this would be difficult because in a large majority of cases the curbs occurred in young animals at grass which had never been handled. He would like to ask Mr. Gold how he proposed to use electrical treatment on young animals—his apparatus would have to be heavily insured.

Mr. Gold also stated that all these animals with curbs were marked on firing. He did not agree that it was necessary to fire the majority of curbs; quite a few would go away by themselves with no treatment at all. If an animal had well-shaped hocks with a curb at two or three years old, when it reached the age of seven or eight the curb had probably disappeared. He had a horse which he had to stop showing as a three-year-old because it showed a curb but now it was seven its hocks were quite clean. It was quite unnecessary in many cases to mark an animal with the firing iron for curbs; they could be got away, provided the hock was well shaped, with the ordinary established old-fashioned treatment.

There was one point about strained tendons in which he had been very interested but was unable to follow up, namely, the treatment he had heard was being used in America at the moment. A lot of firing was done in America. American veterinary surgeons were more firing-minded than the British, and when he was there last year he tried to pick up as many tips as he could. He was told that following firing of strained tendons the whole leg was immediately put into a plaster cast and left for a matter of six weeks or so. Unfortunately he was unable to see this done but it struck him as being a very good method if one could carry it out. He wondered if any British veterinary surgeon had heard of the method.

Professor L. P. Pugh (Cambridge) recalled a story that was told by Professor Pemberthy of an occasion when he was examining students in Dublin. A horse was brought out and the Examiner asked the student what was wrong with it; to which the student replied, "Shure sorr, he's sprung a tendon." "Yes," said the Examiner, "and what would you do about it?" "Shure sorr, I should foire it." "What for?" asked the Examiner. "Shure sorr, for about a fiver," was the prompt reply. Professor Pugh said that although the question of economics must inevitably be taken into consideration in these matters, yet he did feel that the vast majority of veterinarians who fired horses did so because they had convinced themselves by bitter experience that the results were superior to those obtained by other methods.

He entirely agreed with those speakers who insisted on a long period of rest in a box or in a yard and not on the grass, during the recovery process.

There were two points raised by Mr. Gold in his paper. He referred to the stresses a horse had to stand up to after being treated for strained tendons—how they had to go over jumps and land sometimes on one leg. Professor Pugh maintained that the majority of strained tendons broke down again when the horse was going right out on the flat, especially if it was tired or not absolutely fit. The tendon "went" when the affected forelimb was in extreme extension at the gallop. This was the reason why horses which had been fired would never stand up to racing on the flat and yet would race or hunt over country and win many times without recurrence of the trouble. When they went over a jump they were poised and co-ordinated for the landing with muscles and tendons ready to take the strain.

The other point in the paper referred to changes in the nerve supply to the tendon and resulting in permanent disability. He had always understood that in practice it was advisable "to leave a back door open" in such cases but he thought that this was the most perfect story he had ever heard of in this respect. Mr. Gold won both ways. You cannot detect the nerve changes before death and afterwards it was too late! He would like to ask Mr. Gold what evidence there was to support his contention that if tendons did not respond to treatment, it was because the tendon trouble was a sequel to the nerve changes. Even if these cases that did not respond to treatment were subsequently shown to have nerve changes, how did they know that they had not arisen as a result of all the drastic treatments applied before they had realised that they were dealing with an incurable case?

Mr. J. S. M. Cosgrove (Dublin): He was disappointed in Mr. Gold, in that he had not gone far enough and had restricted the use of inductotherm on strained tendons. He himself used the inductotherm extensively but not exclusively and he thought there was a place for both this type of treatment and for the firing iron. A number of factors were a good guide as to the type of treatment suitable for a particular case, *i.e.*, whether to use electrotherapy or line firing. These factors were (1) the degree of strain, (2) conformation, and (3) the type of horse (hunter, flat racehorse, 'chaser).

In the first case very slight strain responded well to electrotherapy and frequently one could remove all traces of the injury and subsequent inflammation. In the severe strain accompanied by definite

lameness he would always resort to line firing and long rest. In his opinion, conformation was very important and if it was not good he had found results would be bad by either firing or inductotherm. He referred particularly to horses, back of the knee, with long pasterns, short stumpy pasterns and straight fetlocks, particularly if these conformations were associated with the limb being turned inwards or outwards. The type of horse and the work he was asked to do was also of considerable importance and he had found in hunters that excellent results could be obtained in the light or slight strain with the inductotherm, and quite good results in the case of a bad strain after firing and resting for 12 months.

Continuing, Mr. Cosgrove said it was impossible to speak of the results in racehorses generally and he found it better to sub-divide them into groups according to the distances of the races for which they were most suitable and as to whether they were 'chasers. In his experience he found that short distance running horses or sprinters were not good subjects for either inductotherm or firing. He thought the explanation for this was that these horses usually had a long extravagant stride and the strains were more likely to occur when the limb was carried in this extravagant extended position at full speed. On the other hand, the long distance horse or stayer and most steeplechasers were much better subjects for treatment as these horses had an entirely different action from that of the sprinter; their stride as a rule was much shorter, they bent their knees noticeably, and had not the rather free extravagant smooth stride of the sprinter who was always very beautiful to look at. Consequently, the limb remained nearer the centre of gravity at all times and was therefore less subject to injury or strain.

A predisposing cause which was evidently becoming more prevalent in Ireland was faulty and careless dressing of hooves in the young unbroken animal and later on equally careless and hasty cold shoeing. The present-day blacksmith would appear to be losing the art of dressing the hoof with a knife and had recourse to the easier and quicker method of rasping the sole, wall and bars. It would be noticed that after a number of dressings by the latter means the heels of the hoof became noticeably lowered and weak, while the toes became long and pointed. It was only a matter of simple mechanics to realise what undue strain this threw on the flexor tendons and suspensory ligament. Thus, on the above points he decided what type of treatment he would use in a particular strain. To sum up, he was of the opinion that in slight degree of strain the inductotherm was ideal and the most suitable form of treatment to adopt. He had found that in these slight strains treated in a subacute condition for about 14 days, very frequently all traces of strain could be removed. He always insisted on at least three months' rest —the longer the rest the more sure the result. This was particularly important in Ireland, which had often been described as "a nation of horse dealers," and veterinary surgeons tried to return horses to their owners with as little blemish and as saleable as possible.

In the more severe strain accompanied by lameness he was of the opinion that firing was the treatment of choice. Whether it was the actual firing that gave the good result in this case one would not like to say, but fortunately in Ireland it was the accepted custom to give all fired horses at least 12 months' rest, which undoubtedly must have a tremendous amount of bearing on the final result. It was also the custom there that when these fired horses did get back again into training they were given at least three months' road work. He had heard of a well-known trainer in olden times who frequently broke these horses to harness and drove them in a trap.

He thought the inductotherm gave much better results in conditions other than strained tendons, and one in which he thought it gave spectacular results was in the various forms of common paralysis of the limbs such as pre-scapular and radial paralysis. One case he had in mind occurred about two years ago; it was being treated by a colleague for radial paralysis and he suggested that the inductotherm should be used on her. She was a mare of 18 years of age, heavy in foal and showing definite inflammation of all the tendon sheaths and joints of her unaffected leg through her putting all her weight on this leg for some time. Electrotherapy showed spectacular improvement in about four days and the mare was walking practically sound in about a fortnight with a considerable reduction in the inflammation of the opposite leg. Excellent results had also been obtained in the distension of joints and sheaths such as bog spavins and thoroughpins. This year he treated a show horse for a thoroughpin which appeared about a fortnight before the Dublin Horse Show; a week's treatment reduced this swelling completely and the horse not only stood up to a week's galloping at the show but won a first prize in his class: the thoroughpin did not recur. Last year he treated a yearling with bog spavin of long standing. This yearling shortly afterwards made £5.000 at Newmarket Sales and since then had won two races this year without a recurrence of distension of this joint. He realised, of course, that other methods of treatment of these two conditions were equally successful but he thought the beauty of the inductotherm was the rapidity of the result without any disfigurement or blemish on the part affected, which always remained for some time afterwards when blisters, etc., were used.

The success of the inductotherm depended on the hyperaemia it set up and with this in mind it had been used successfully as a supplementary treatment in a number of cases of fistulous withers. It had also been used in a number of bone conditions such as splints and sore shins, but unless treatment was extensive the relief was found to be of a temporary nature. It had been used on racehorses expected to run in a matter of days. Here it undoubtedly relieved the pain and soreness and certainly improved the horse's chance of giving of his best on a racecourse.

Professor Pugh, in his remarks, had said that he had not heard of the effect of nerve degeneration associated with tendon breakdown. He had a recollection of a Congress in London where a very notable Professor from Edinburgh had spoken at length on these nerve changes. He was sure that at least some of the breakdowns he had come across might have been due to nervous degeneration of the tendon so supplied.

In conclusion, he would like to thank Mr. Gold for his paper and to say his knowledge of the subject by listening to him and the other members who had joined in the discussion had improved tremendously.

Mr. F. C. Gillard (Folkestone): He had no experience of electrical treatment and he felt he was trespassing in daring to speak, but he would confine his remarks to some of the other points which had been discussed. He was forcibly struck by the remarks of Mr. Cosgrove. He was in entire agreement with what he said with regard to conformation and he was surprised that this point was not a main feature in qualifying remarks on the treatment of strain or ruptured tendons or ligaments and allied injuries. Without considering that point, he did not see how it was possible for the veterinary surgeon to advise his client upon the method of treatment because it was so desperately important. There was a very old saying which would illustrate one of these minor points: The speedier or faster the horse, the lower the strain. That had always been very noticeable to him. A hunter, especially in deep going, ran less risk of serious strain or rupture than a racehorse on the flat or over fences. Subcarpal check trouble was rarely noticeable except in the heavier breed of horse; the long pastern horse was very liable to break down, especially in deep going.

He did not think it had been mentioned that some of these sudden ruptures of tendons occurred not because the horse was flat out or because the conformation was a contributing cause, but because the rider, when the horse was travelling fast, allowed the reins to slip through his hands. He remembered a case from his early boyhood; the rider was questioned as the horse suddenly faltered, and he said that the reins had slipped through his hands. The horse's conformation was perfect and there was nothing to suggest that there was anything wrong with the tendons. The horse was only doing a half-speed gallop but both tendons went and that was undoubtedly due to the reins having suddenly been released.

A good deal had been said about paste treatment but nothing had been said about absorbent treatment. He had carried out absorbent treatment with an iodine preparation, iodine potassium iodide, with a little water to mix and glycerine, 2 drachms of each to the oz. Many years ago he had an American millionaire client who had a very big stable of all kinds of horses—hunters, show jumpers, steeplechasers, trotters and "American pacers." The last mentioned, with their peculiar characteristic action or gait, one would have thought would have predisposed to strains, but this was not so. In those days the headgrooms visiting shows were persuaded by the quack vendors to try their cure-alls and unfortunately cases were so treated without his advice or knowledge until failure had resulted. He persuaded his client to test these so-called cures on sprains of all kinds—curbs, strained or ruptured tendons, etc.—and to select a number of each type and compare results with his own absorbent dressing used on the worst cases of each type. The result stopped all further purchases from the quacks. He mentioned that to show that he thought he was justified in carrying out that treatment before firing, of which he had always been an advocate.

He would not pretend to give a reason why in the opinion of many firing was the best form of treatment, but results did support that view. He knew very well that it was not only popular with his generation of veterinary surgeons but with trainers and owners of horses used either for hunting, racing, point-to-point, and so on. If one did not fire the horse the owner would go to somebody who would carry it out. It would have been difficult to convince the owner that firing was not the appropriate treatment. There had been too many cases where treatment of various kinds had been unsuccessful. the owner lost the use of the horse for the season and eventually it had to be fired.

Road work was mentioned: that was an important point. Walking on the road to get a horse's legs strong again, whether he had been fired or not, was very essential. He had not heard point firing men-

tioned; it was a common practice among French veterinary surgeons. For splints and small bony enlargements, he thought a very small pin-iron gave very good results

He was surprised to hear that curbs were confined to the young horse and were seldom seen in the older horse. That had not been his experience; he had seen a good deal of it in youngsters and also in horses which had been working for some years, hunting or racing, and apart from the disfigurement firing over the curb was the most successful treatment. He would support the statement that without any other treatment applying a plaster cast had very marked beneficial results.

Mr. E. P. BARRETT (Guildford): In many veterinary practices nowadays the horse, as a patient, was so rare as to be almost a curiosity. No one had mentioned the use of blistering without firing and he would like to know from the experts whether they did not think that it would be adequate in many cases. Secondly, many of the younger members would like to know what anaesthetic was used for firing, whether local or general. He thought the practitioner must consider the cost to the owner, and it seemed to him that probably a light blister would get rid of some of the bursal enlargements just as well as the inductotherm, and would cost very much less. Someone told him that it was excellent for bruises and torn muscles, and when he asked what course of treatment would have to be given, he was told, "About 40 minutes twice a day for something like three weeks." He thought the cost of this would be quite unreasonable.

Mr. J. BOWETT (Worksop): When he first met Mr. Gold, at his professional examination, he asked what he thought about firing and he (Mr. Bowett) replied that he had seen horses fired which appeared to have done well; Professor Wright, who was standing by, said that was a very good answer and, of course, he got through his examination! (Laughter.) Professor Wright taught him this particular subject. He did not really believe in it for what he said was that the man in the boiler suit would fire the horses. The veterinary surgeon was judged by his performance. He would certainly buy an inductotherm and use it because he had fired horses which had definitely shown success.

Mr. Cosgrove mentioned yearlings with bog spavins. He had a yearling last year which had to go to Doncaster. It had a hock as big as a football. The only treatment pursued was massage with French chalk and one could not see anything wrong with the animal and it won a race this year. There was a very famous veterinary surgeon called Teddy Shave who, he believed, fired himself, so that there must be something in it!

Professor W. M. MITCHELL (Edinburgh) said that he was particularly interested in this discussion as Professor Pugh had indicated that he had heard nothing of the pathological changes in the nervous system of the horse. He would therefore direct most of what he had to say to a consideration of the neurological origin of many of the clinical conditions from which the horse suffered, one of them possibly being sprain of the flexor tendons.

For many years, at any rate in academic life, he had impressed upon the limited circle to whom he had to speak, the importance of efficient nerve muscle mechanisms which controlled movement in the horse, and the more he saw of *post-mortem* examinations of horses destroyed on account of various incurable disabling conditions the more he was convinced that many of them were predisposed to by antecedent lesions of the nervous system. He was not belittling trauma as the immediate cause which precipitated them for trauma was something with which every animal had to contend throughout its life, but he thought that all would agree that a horse which was not 100 per cent. fit was likely to suffer more easily from strains and stresses than one which was absolutely fit. He believed that many horses failed to stand up to minor stresses and strains because there was depreciation of the nerve-muscle mechanisms controlling movement, as revealed by gross lesions of peripheral nerves which he had repeatedly found in horses destroyed on account of incurable lameness associated with many local clinical conditions.

As an example of how complex depreciation of nerve-muscle control could be he would refer to a case of a horse destroyed only a week ago because of intermittent luxation of the patella. Apart from the local lesion of the femero-patellar joint he found after stripping the soft tissues from the skeleton that several of the inter-articular joints of the cervical vertebrae were affected with osteo-arthritis. When the bones were boiled out exostoses were found at the anterior part of a number of intervertebral foramina, the opposing exostoses arising from adjacent vertebrae meeting and forming an adventitious joint. Because of the joint between the two opposing exostoses movement of the neck remained free. He mentioned this case because it served to show how differently the skeleton might be affected in different parts of the body; thus luxation of the patella was unable to achieve any satisfactory compensation and proved to be the striking clinical picture, whereas diminished muscular function of the neck muscles throwing extra strain on the vertebral articulations of the neck was compensated for by buttresses of new bone and no clinical signs were recognisable.

Many further examples of depreciation of nerve muscle mechanisms could be given. It was not surprising that Mr. Gold had mentioned the likelihood of tendon sprains in a small percentage of cases being preceded by degenerative changes in the nerves supplying the muscles controlling the tendons.

He was in agreement with this statement though he only had factual proof of such degeneration in one case which was unfortunately the only case of sprained tendons he had been able to follow up after destruction. As yet through lack of knowledge of how damage to the peripheral nerves was caused the prevention of its occurrence was impossible.

In the treatment of sprained tendons he considered that graduated exercise probably played the most important part, as by this means the tone of the muscles was restored gradually and spasm was thus less likely to injure the weakened tendons, but to be really effective it should be prolonged, as long as a year in some cases, before reaching the stage of full work.

The methods of assisting the repair of sprains of tendons by vasodilation by means of the inductotherm machine and the old methods of blistering and firing both had their uses, to his mind, depending upon what one was trying to achieve. By means of inductotherm treatment the deep tissues were directly heated through eddy currents being caused, and temporary vasodilation followed to counter the heating of the tissues; the action was short lived; blistering and firing, on the other hand, acted by producing both a direct superficial irritant action with dilatation of the vessels of the skin and a deep reflex action causing vasodilation of the vessels going to the underlying damaged tissues and this vasodilation action was a prolonged one.

Mr. G. P. MALE (Reading) sent a contribution to the discussion. It was read by the Chairman as follows: As one who has for the last 50 years been deeply interested in the treatment of strained tendons and ligaments in horses, perhaps you will allow this short contribution to the discussion of the paper, and I am only sorry that I cannot attend in person. Not only have I fired many hundreds of horses but during the last few years have observed the effects of electrotherapy on many others.

When this treatment was introduced some time ago, I advised some of my trainer clients to try it. One sent five horses for treatment and all broke down badly when raced or asked to do fast work, three were destroyed as useless, and two I subsequently fired.

Another sent four and all these broke down. Two trainers purchased the necessary apparatus, and used it themselves under veterinary supervision on a number of horses, and after a good trial have given up its use.

I have followed the career of about 40 and most of these broke down when raced or being prepared for racing, although controlled exercise as advised was carefully carried out.

The legs looked very nice, but on closer observation it was apparent that no strong fibrous repair tissues or adhesions had formed round the ruptured fibres of the tendons or ligaments, only the inflammatory effects had been removed. In other words, nature's efforts to repair the damage had been interfered with and the tendons were left weaker than before and more likely to break down.

Even a much publicised article in *The Field* does not claim that this treatment has any value for tendons and ligaments below the knee and hock. Experiments have been carried out in some institutions to ascertain the value of electrotherapy in equines, and I understand the results in cases of badly sprained tendons and ligaments below the knee and hock have been unsatisfactory as far as racing in concerned.

Faradism and other forms of electric treatment have been practised and recently, with one of my colleagues I had the opportunity of observing the results in two horses under treatment by a specialist for about three months. In each case the horse got progressively worse until the treatment was stopped and I was requested to fire them.

Mr. Gold says that "no one will convince him that scar tissue can give any support to tendons and ligaments in this area." Here I think he misses the point as the chief effects of firing are to assist nature's efforts to repair the damage by bringing an increased supply of blood and lymph to the parts, so that instead of soft connective tissue being formed in the damaged tendon or ligament to repair the ruptured fibres, strong fibrous tissue results and strong adhesions take place.

The scar tissue tightens and thickens the skin, but no one suggests that the skin carries the weight of the horse—this, of course, is absurd.

The strains described by Mr. Gold in which the horse may walk sound in from a few days to two or three weeks are simple ones, and if left to nature and well-controlled exercise, would no doubt cure themselves, but it is the severe cases that are the problem, and in these the actual cautery, in my experience, is the only cure

when properly applied. I should be only too happy if any form of electrotherapy could be successful, but up to the present this unfortunately cannot be substantiated.

Professor MacQueen's name has been mentioned with regard to firing. At one time, I was house surgeon at the Royal Veterinary College, and saw him use the actual cautery on many horses, and did many myself under his direction, but I do not remember his ever casting doubt on its efficacy, nor do I think he would have advised this treatment if he thought it would not be successful.

The Reply

Mr. Norman Gold, replying on the discussion, said that he thought the speakers had been relatively kind to him. Professor Mitchell had answered some of Professor Pugh's pertinent remarks. He owed what little knowledge he had concerning nerve degeneration to Professor Mitchell, who some years ago suggested that it was associated with tendon strain in horses. Since that time he had endeavoured to carry out some examination of nerves in such cases. In spite of what Professor Pugh said he was convinced that in many cases nerve degeneration preceded tendon breakdown, but he did not know of any method of diagnosing the condition during life. No doubt the time would come when by applying electric current one would be able to ascertain the permeability of the nerve and whether degenerative changes had taken place or not.

He proposed to try to answer the questions in an omnibus form. One found that tendon breakdown was much more common in some stables than in others and there must be a fundamental reason for it. He thought it was the fact that some trainers did not give the animals sufficient controlled exercise; in other words, they did not get them fit before asking them to race. Some trainers got an awful lot of breakdowns, others got relatively few. The fit animal was far less likely to break down than the animal improperly trained.

He considered that the inductotherm was the best means of producing hyperaemia in the region. Mr. Male stated categorically that firing produced a better hyperaemia than application of the inductotherm; this was not scientifically correct. Dr. Fraser mentioned quite a considerable amount about what he called the wet tendon, rather as if it preceded the tendon breakdown. He would point out that pathologically the wet tendon was one in which changes were taking place as the result of a partial tendon breakdown. If the tendon was wet and the animal was worked the breakdown would be completed.

He had no experience of the use of Strong's apparatus but he had no doubt that in the case of degenerative muscles it should be beneficial. Dr. Fraser talked about a paste which he (the speaker) had used and which he was continually altering and endeavouring to improve. One felt that one should be able to get a little farther advanced than in the reign of Charles II when they used biniodide, even on the King himself. He was sure some of these pastes were very beneficial and less painful than the biniodide blister. He was using material which had been given him to try and so far the results were encouraging but he would rather not discuss it at length because it was not his idea; someone else should have the credit, but it was much in advance of anything which had been used previously.

Two speakers seemed to agree with his suggestion that controlled exercise was important. He was convinced that whatever treatment was applied to a strained tendon controlled exercise was 60 per cent. responsible for the result. Where one treated the tendon and the animal was given rigidly supervised exercise the results were infinitely better than the actual applied treatment when it was followed up by just turning them out. The late Major F. Pryor showed him some figures of the results of Royal Army Veterinary Corps firing which made extremely miserable reading.

He would thank the speakers for being particularly kind on a highly controversial subject.

The Chairman proposed a vote of thanks to Mr. Gold for his paper, to Dr. Fraser for his opening remarks, and to the various speakers in the discussion, and this was accorded by applause.

Weekly Wisdom

Don't take yourself too seriously—avoid pomposity like the plague; cultivate a true sense of relative values, so that you know what things are really worth and what things will give you true personal happiness; try to be kind and generous in human relationships; use all the courage that God has given you. . . . For goodness' sake have some fun and be gay.—Lord Balfour of Inchyre (address to the Chartered Accountants Students Society of London).

No.2.—ELECTROCARDIOGRAPHY IN THE HORSE*

BY

WILLIAM C. MILLER, M.R.C.V.S., F.R.S.E.,

AND

Lieut.-Colonel J. HICKMAN, M.R.C.V.S.

(From the Animal Health Trust's Equine Research Station, Balaton Lodge, Newmarket)

On the afternoon of Tuesday, September 9th, 1952, there was again a full attendance in the Royal Hall, Harrogate, for the consideration of the above paper, which was illustrated by lantern slides. The Chairman was Mr. W. R. McKinna, M.R.C.V.S., D.V.S.M., and the Recording Secretary Mr. G. S. Donaldson, M.R.C.V.S., both of Huddersfield.

The Chairman : It is my privilege to introduce two well-known members of the profession, Mr. W. C. Miller and Colonel Hickman, authors of this paper. They have opened up a new field in clinical veterinary medicine which will provide fresh knowledge on the diseases of the cardiac and vascular systems. They are to be congratulated on carrying out this research, especially when one thinks of the difficulties of controlling their patients and the interpretation of the results.

The paper has been circulated but I will ask the authors if they would like to amplify what they have said.

Mr. W. C. Miller : The first duty we have after accepting your invitation to read a paper to Congress is to express our thanks to the Provisional Committee for the honour of the invitation.

We feel that we are not in a very strong position since instead of being able to present a complete account, the work is still in progress. There is a great deal still to be learned with regard to equine electrocardiology, so that if there are defects you will realise that more research is needed before we reach finality.

[A lantern demonstration was then given by the authors of the paper, consisting of a series of illustrations of the fundamentals upon which the use of the electrocardiograph depends, and a further series of heart lesions and tracings. An explanation of each slide was given. The paper which follows and the illustrations herewith cover the main grounds of the demonstration.—Ed.]

PART I

Introduction

In order to make a complete cardiological examination, in addition to clinical methods and observations, it is necessary to record graphically arterial and venous pressures, heart sounds and the electrocardiogram and to correlate them so that one can ascertain what is occurring in each of them at a given time in the cardiac cycle.

A very important and useful part of this examination is the recording and interpretation of the E.C.G. Although this paper is devoted entirely to the E.C.G. of the horse, one must not lose sight of the fact that it forms only one part of a full cardiological examination, and therefore too much emphasis must not be put on its interpretation. The E.C.G. should be considered and evaluated in conjunction with the other findings.

It would appear from the veterinary literature of this country that we have not given equine electrocardiography

* Presented to the 70th Annual Meeting of the British Veterinary Association, at Harrogate, on September 9th, 1952.

the consideration it merits and it is proposed to make this paper an introduction to the subject, in the true sense, by discussing briefly the history of E.C.G., the types of apparatus used and methods of recording, the physiology of the heart's action, the normal variations in the equine E.C.G., abnormalities in the conducting mechanism of the heart, and finally our views on its future application and usefulness.

Historical

For many years it had been recognised that all muscular movements are accompanied by changes in electric potential. In 1856 Koelliker and Muller first demonstrated the presence of a current of action in the heart by putting a frog sciatic-nerve-gastrocnemius-muscle preparation in contact with a beating heart; they demonstrated two distinct electric changes at each beat of the ventricle. In 1887 Waller, using a Lippmann capillary electrometer, showed the possibility of registering the human heart beat and in 1892 Bayliss and Starling demonstrated the first satisfactory curves from the mammalian heart. However, it was not until 1903, when Einthoven, of Leyden University, introduced his "string galvanometer," that the demonstration of these currents became a practical possibility, and this may be said to be the starting point of the study of electrocardiography.

Physiology of the Heart's Action

An electrocardiogram is the graphic or photographic record of the electrical currents produced by the beating heart. All muscle movements are accompanied by changes in electric potential of the active part relative to the passive part, and it is the effects of these which are recorded as an electrocardiogram. To record these currents clinically, use is made of the fact that the electrical currents spread throughout the body and can be captured and recorded from the skin surface.

The impulse which stimulates the heart to contract originates in the S/A node (the "Pacemaker"), which is under control of the vagus. In the horse this node, which is not clearly defined, lies in the *Sulcus terminalis* at the base of the anterior vena cava. It is a whitish body irregular in shape and measures about 3 cm. long by 0·5 cm. broad. This impulse initiates a wave of excitation which radiates throughout the atria resulting in their contraction.

Situated at the base of the inter-atrial septum is a mass of pale grey fibres, oval in outline and measuring 0·6 to 0·8 cm. in length by 0·4 to 0·7 cm. in width, which is known as the atrioventricular node and was first described by Tawara in 1906. Continuing from this node is the bundle of His, which in the horse is very short, measuring less than 1 cm. long and about 0·5 cm. broad. This bundle descends into the inter-ventricular septum and bifurcates into two main divisions, one for the left ventricle and one for the right. These branches ramify extensively under the endocardium and terminate in what are generally called the fibres of Purkinje.

The function of the A/V node and its branches is to pass on from the atria to the ventricles the excitatory impulse. It is interesting to note that the velocity of the impulse in the atria is comparatively slow, from 0·8 to 1·2 metres per second, whereas in the ventricles it is much more rapid, 3 to 5 metres per second. In fact, this velocity in conjunction with the complete distribution of the bundle of His results in all portions of the ventricles contracting practically simultaneously.

Types of Apparatus

Electrocardiograms are recorded by two main types of apparatus (i) the String Electrocardiograph, and (ii) Valve-operated Cardiographs.

String Electrocardiograph. Those in use to-day are essentially the same as that designed by Einthoven in 1903, and the principles of their use are based on his discovery that when a very fine string or fibre is suitably mounted in a magnetic field, it will respond with a high degree of accuracy to minute electrical currents by bending or being deflected in a plane parallel to the faces of the pole pieces of the magnet.

The essential feature of this type of electrocardiograph is the string galvanometer. This consists of a powerful magnet between the poles of which is stretched a fibre or string made of either glass or quartz and covered with gold, silver or other conducting material, and with a diameter of approximately 0·004 mm. This galvanometer is connected with an optical system so that the fibre can be illuminated, magnified about 600 times and its movements projected for registering. In short, the fibre which is placed between the condenser and objective of a microscope is illuminated by a 12-volt gas-filled silvered lamp. The beam is projected on to a combined cylindrical lens and mirror which reflects the beam back on to another mirror which, in turn, diverts the beam on to the camera. The fibre appears as a vertical shadow about 2 mm. wide which can be sharply focused by a special screw. This forms the basis of the string type electrocardiograph but, in addition, a number of refinements have been incorporated into the latest models.

(i) *Cylindrical Lens.*—This lens is fitted in front of the film and has lines engraved on it at intervals of 1 mm. across its width which produce shadows and form lines along the length of the record. These lines enable the extent of the deflections of the fibre to be measured in millimetres.

(ii) *Time Marker.*—This consists of a spoked wheel which rotates and interrupts the beam of light, as it leaves the microscope, at regular intervals, so that for short intervals no light falls on the film and a sharp line appears on the record. These wheels are usually provided with five spokes, one of which is wider than the others. The spoked wheel is rotated by a clockwork mechanism, rotating exactly five times per second so that a thin line will appear at every one-twentyfifth second and a thick line at each one-fifth second. This timing is thus independent of the speed of the camera and the lines appearing on the record permit accurate time details of the components of the cardiac cycle to be assessed.

(iii) *Fibre Sensitivity.*—It is necessary to standardise the sensitivity of the fibre and provision is made whereby 1 mV. can be passed through the fibre and the slackness or tightness of the fibre adjusted so that any required deflection may be obtained. Einthoven standardised to a sensitivity of 10 mm. deflection for 1 mV. at a magnification of 600 diameters. This standardisation is almost universally used in medicine and is quite suitable for equine work and the one we have adopted.

(iv) *Skin Current Compensation.*—In addition to the currents resulting from the action of the heart, there is variable current caused by the glandular activities of the skin and is known as the "skin current." Special arrangements are incorporated in the apparatus whereby this potential difference is automatically compensated and the fibre will remain at zero with varying skin currents. This may be done by inserting into the patient circuit a direct current of equal intensity and opposite polarity to the "skin current" or by blocking the direct skin current by means of a condenser.

(v) *Recording Camera.*—The standard film camera used has a film 6¾ inches long and is so arranged that it can be exposed in three sections, *i.e.*, one for each of the three standard

limb leads. This is not very satisfactory for equine work because the heart rate being slow only two or three normal cardiac cycles are recorded on each tracing. However, it is possible to incorporate a continuous paper camera which takes a 52-foot roll of photographic paper. It runs at a speed of 2·4 cm. per second and is entirely satisfactory for equine work.

Valve-operated Cardiographs. In recent years, due to the introduction of electronic valves and valve amplification, new types of cardiographs have been developed incorporating a variety of direct pen-writing systems.

It will suffice to say that these cardiographs incorporate an amplifier, recording mechanism and a standardising and control panel and that their essential requirements are the same as the string-galvanometer instruments.

The chief advantage of these direct writing electrocardiographs is that a record of the electrocardiograms is immediately available ; in fact, it can be observed actually recording, and it obviates the time and trouble of developing the films.

There are several types of direct recorders varying from pens to fine capillary jet sprays. The pens may be either direct ink writing, heated styluses (usually a heated sapphire), or a fine loop of metal having a high melting point such as platinum, which records on black-backed paper covered with a white oxide ; the heat from the pen volatilises the white oxide so that the black back becomes visible in the track of the pen.

Most of our recordings have been made with the Standard Cambridge Electrocardiograph (Fig. 1), but in addition, due to the courtesy of A. C. Cossor, Ltd., we have experimented with the Cossor Electrocardiograph (Fig. 2), which is fitted with an iridium-tipped tungsten stylus and records on paper backed with an aluminium electro-conducting composition and faced with a cellulose solution as a carrier for the active recording agent, which is colourless. Upon the application of a voltage between the conducting back and the prepared surface, a current flows through the paper and renders the active chemical opaque. This action is practically instantaneous ; it is clean and a permanent record results. When using valve-operated cardiographs it is necessary to check against valve deterioration and this may best be done by periodically checking records against a string electrocardiograph.

Electrodes.—It has already been stated that these small electrical currents emanating from the heart spread throughout the body and therefore can be recorded from the skin surface. To do this it is necessary to attach to the skin a suitable electrode. The essentials of a suitable electrode are that it does not polarise and that its electrical resistance is low and stable.

In the early days of electrocardiography, contact was made by immersing the limbs in saline baths or attaching to them electrodes covered with saturated saline swabs. To-day, the direct contact metal electrode is in vogue and those as supplied for medical purposes are quite suitable for equine work. They are curved metal plates measuring approximately 1½ inches by 1 inch, which are attached to the limbs with rubber straps (Fig. 3). Before applying the electrodes the hair should be

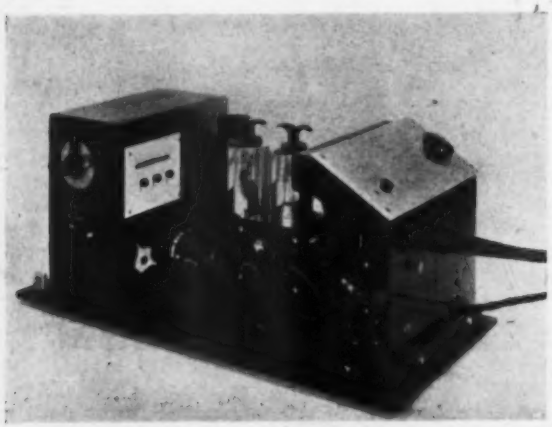


Fig. 1.—Cambridge " standard pattern " electrocardiograph.

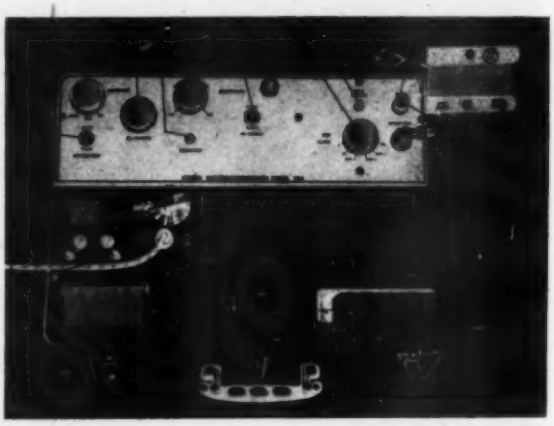


Fig. 2.—Cossor direct-recording electrocardiograph.

Fig. 3.—Horse in stocks, showing limb leads and continuous paper " Cambridge " electrocardiograph.

clipped, the skin cleaned with aether and then a special electrically conducting electrode jelly is well rubbed in. In the horse these electrodes may be attached on the anterior or lateral surface a few inches above the knee in the forelimbs and on the lateral surface of the gaskin in the hind limb. The electrodes should not be applied too tightly as the pressure may interfere with the peripheral circulation and also may result in muscle tremor. In the forelimb a good snug contact of the electrode to the skin is easily obtained but in the hind limb it is more difficult, due to the depression in front of the gastrocnemius tendon which on occasions may require to be packed with cotton wool to obtain a satisfactory fit. Care should be taken to ensure that only those electrodes supplied with the apparatus and the electrode jelly recommended by the manufacturers of the apparatus are employed.

There is one further important point ; the horse's body, feet and legs, etc., must be dry. Rain or sweat on the surface is liable to upset the recording.

Taking an Electrocardiogram

In taking an electrocardiogram the chief difficulties to be overcome are A.C. interference, movement of the horse and somatic tremor (Fig. 6).

A.C. interference may be overcome by having the instrument well earthed, preferably to a cold water pipe, and having the horse insulated by standing him on a ¼-inch rubber mat. Another method, often suggested, is to insert a condenser in the limb-earth circuit, but this, in our experience, has not been very effective. Movement of the horse and somatic tremor can be overcome only by patience and getting the horse accustomed to his surroundings. In some cases, having the box almost in darkness produces the desired effect whereas with others, if they can see their stable companions they will keep still. Care must be taken to ensure that the machine does not vibrate when working. This is especially liable to occur with the string type electrocardiograph when the handle is depressed to rotate the time marker and the drum to which the spool is attached ; the base of the machine must be firm and level.

Experimentally, the electrical potentials of the heart may be recorded directly by placing the electrodes on definite areas of the exposed heart and clinically, indirectly by placing the electrodes on the limbs or chest wall. In electrocardiography, the term "lead" denotes connecting parts of the body by electrodes with wires to the electrocardiograph. There are three standard leads used in man—lead I, right arm and left arm ; lead II, right arm and left leg ; and lead III, left arm and left leg. In the horse, these leads are lead I, N.F. and O.F. ; lead II, O.F. and N.H. ; and lead III, N.F. and N.H. The use of these leads was introduced by Einthoven and proof for their adoption is known as Einthoven's Law. He considered the heart to be a source of electromotive force situated in the middle of an equilateral triangle, the corners represented by the right and left shoulders and the left groin, *i.e.*, the points of attachment of the three limbs from which the potentials are recorded. Whether this is mathematically sound in the case of the horse we are not prepared to argue but as a starting point in our investigations we decided to adopt the three standard limb leads to see if anything would come to light which would prove of use or diagnostic significance.

Correlating the Heart's Action with the Electrocardiogram

We have already discussed briefly the transmission of the impulse from the S/A node to the terminal endings of the conducting mechanism of the heart. It is now necessary to try to correlate the changes in potential resulting from the various phases of the heart beat with the deflections of the string of the galvanometer as depicted when photographed. In the mammalian heart these deflections conform to a general pattern and the early workers designated the deflections or waves by the letters P.Q.R.S and T (Fig. 4), and they remain in common usage to-day. The P wave denotes the spread of the wave of excitation from the S/A node through the atria and is related to their contraction. The Q.R.S. group represents the spread of the impulse through the ventricular musculature and is associated with the onset of ventricular systole. The final wave in the complex is the T wave, which represents the end of systole and return of the exciting wave to the base of the heart.

It will be seen that when the P.Q.R.S.T. complex is studied, in conjunction with the vertical and horizontal lines on the electrocardiogram, which indicate time and distance respectively, much useful information relating to the action of the heart can be ascertained by measurement.

In the study of the P.Q.R.S.T. complex it is customary to make the following measurements.

(i) *P-R Interval.* This gives a measurement of the time taken for the stimulus to spread from the S/A node to the A/V node and the ramifications of the bundle of His.

(ii) *Q.R.S.* Indicates the spread of the stimulus through the bundle of His and its ramifications and stimulation of the ventricles.

(iii) *Q-T Interval.* Indicates approximately the duration of ventricular systole.

In addition, the regularity of rhythm can be determined by measuring the distance between two or more successive P.Q or S waves and the amplitudes of the individual waves may be measured and evaluated.

Normal Equine Electrogram

To assess, within limits, what constitutes a normal equine E.C.G., the following have to be considered :—

(i) Rate and rhythm.

(ii) P-R, Q.R.S. and Q-T intervals.

(iii) Variations in the conformations of deflections.

It need hardly be mentioned that the rhythm should be regular and that in individual animals the rate varies considerably, from 32 to 42 per minute.

There appears to be considerable variation in the figures given by numerous workers relating to P-R intervals, etc. In few instances is information given regarding the type, age or degree of fitness of the horses investigated, and lack of this information may well account for the discrepancies.

The form of the deflections of the P wave, Q.R.S. complex and the T wave show considerable variations, and in our experience these have been so consistent in what might be termed normal hearts that we feel that we would not be justified, at this stage of our investigations, in saying that they are anything but "within normal limits of variations."

The variations in the deflections that we have observed are as follow : (Fig. 5) the P wave is generally upright or notched in all leads, but occasionally may be diphasic or inverted. The T wave in leads II and III is almost always upright, but occasionally diphasic. In lead I it is more often inverted than upright. A notched T wave has not been observed in any of the leads. The Q.R.S. complexes observed have been very variable and it has not been possible to correlate any special features or pattern with any specific leads.

. . . . . .

PART II

The Uses and Interpretation of Electrocardiograms

The methods adopted for diagnosis, prognosis and treatment of disease in horses resemble those employed in human medicine more closely than do those applicable to farm animals. During recent years there has been a marked trend to regard the herd or the flock as the important economic unit rather than the individual. With horses and, of course, with the majority of dogs, it is still the individual animal which constitutes the unit. Consequently, and since individual values among certain classes of horses are high, methods which will assist in reaching a diagnosis are often justifiable for them when they might not be so for other farm livestock.

A further point worth noting is that in Britain during the last 30 or 40 years the number of veterinary surgeons in practice has almost doubled, but the number of horses now is less than a third. A simple sum in arithmetic will show that to-day no veterinarian in an average general practice can expect to meet more than one-fifth or one-sixth the number of equine cases met with by his predecessor. To-day the opportunities for building up experience are much more limited than formerly. This consideration also leads to a tendency to employ whatever aids modern science can provide. Electrocardiography is not a very recent development, but apart from some experimental uses, its application as an aid in diagnosis seems to have been very largely overlooked or neglected by British veterinarians. In human medicine it has now become almost a standard routine, and while the human physician can perhaps make a fuller use of the information it can disclose, it does seem to us that more use might with advantage be made of it in clinical work when its limits have been defined and when its advantages and disadvantages have become better understood.

The main purpose of this demonstration is to indicate some of the ways in which the electrocardiograph usefully can be employed.

Heart Disease in the Horse

Most authorities agree that organic disease in the horse is comparatively uncommon. The following conditions have been encountered from time to time, but our experience is that none of them is common in thoroughbred horses. *Verrucose endocarditis* is met with affecting one or sometimes both the atrio-ventricular valves, usually in horses with a previous history of severe septicaemia. Various staphylococci and streptococci have been recovered from these lesions. *Deposition of fibrin* on the wall of the atrium is often present in these cases opposite the imperfectly closed valve where a stream of blood has impinged against the wall of the atrium during ventricular systole. *Thrombosis of verminous origin* may occur as the result of heavy migrations of *Strongylus vulgaris* larvae. The predilection site for this thrombosis seems to be the opening of the right coronary artery (Fig. 7). If complete and extensive thrombosis takes place, sudden death occurs from myocardial ischaemia. If the thrombosis is less complete, however, which seems not uncommon, *infarction* occurs over an area of the wall of the right atrium supplied by this artery or one of its branches. Subsequently, this becomes fibrosed, leaving a permanent band of scar tissue and a consequent imperfection in the wave of contraction of the right atrium (Fig. 8). In old horses, *myocardial degenerations* are sometimes to be seen in the musculature of the left ventricle in particular, pale in colour, streaked with small fibrosed areas, and generally showing excess fat embedded among the myocardial bundles. In addition to these, the heart, along with other organs, can suffer, in *acute toxic conditions* of bacterial or other origin, and in various chronic poisoning conditions organic changes have been described.

It is, however, probably correct to say that organic changes in the horse's heart are not very commonly met with, in spite of the strains and stresses to which this organ is subjected during work.

Conversely, functional changes and irregularities are not at all uncommon, particularly in the type of horse which is subject to sudden or prolonged circulatory strains, such as the racehorse and hunter.

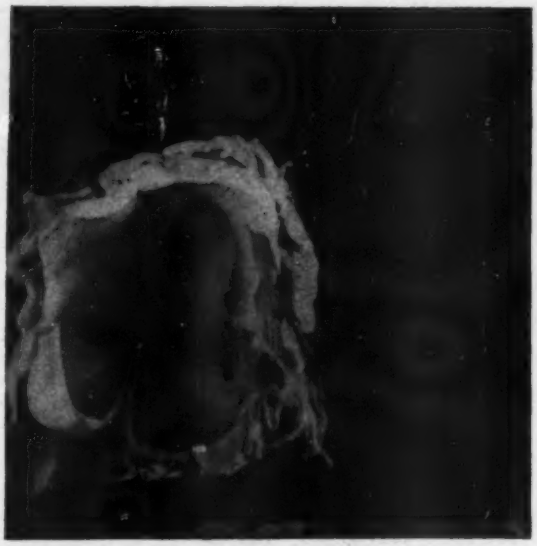


Fig. 7.—Endarteritis and thrombosis of right coronary artery, caused by strongyle larvae.

Fig. 8.—Infarction of right atrium and subsequent fibrosis.

The recuperative powers and the capacity of the heart to adapt itself in structure and function to many different exigencies makes approach to heart dysfunction difficult and should lead to caution. There are few diseased conditions in animals beset with more pitfalls than diagnosing, prognosing and treating heart disease in the horse. Nearly everyone of experience has encountered the type of heart case in the horse where history, behaviour, subjective symptoms, physical and mechanical phenomena and the conclusions reached

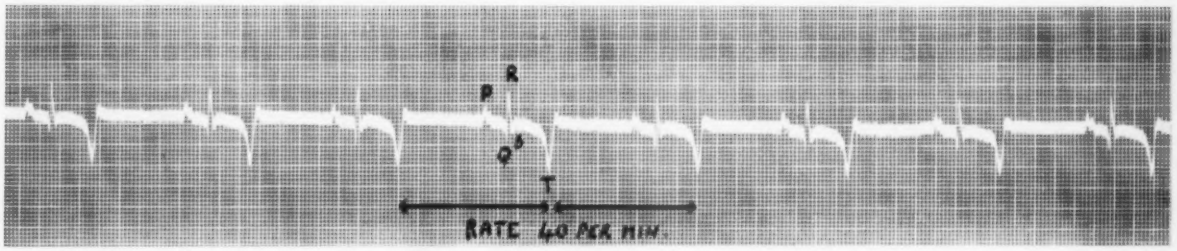


FIG. 4.—Normal electrocardiogram of heart's action, lead I.

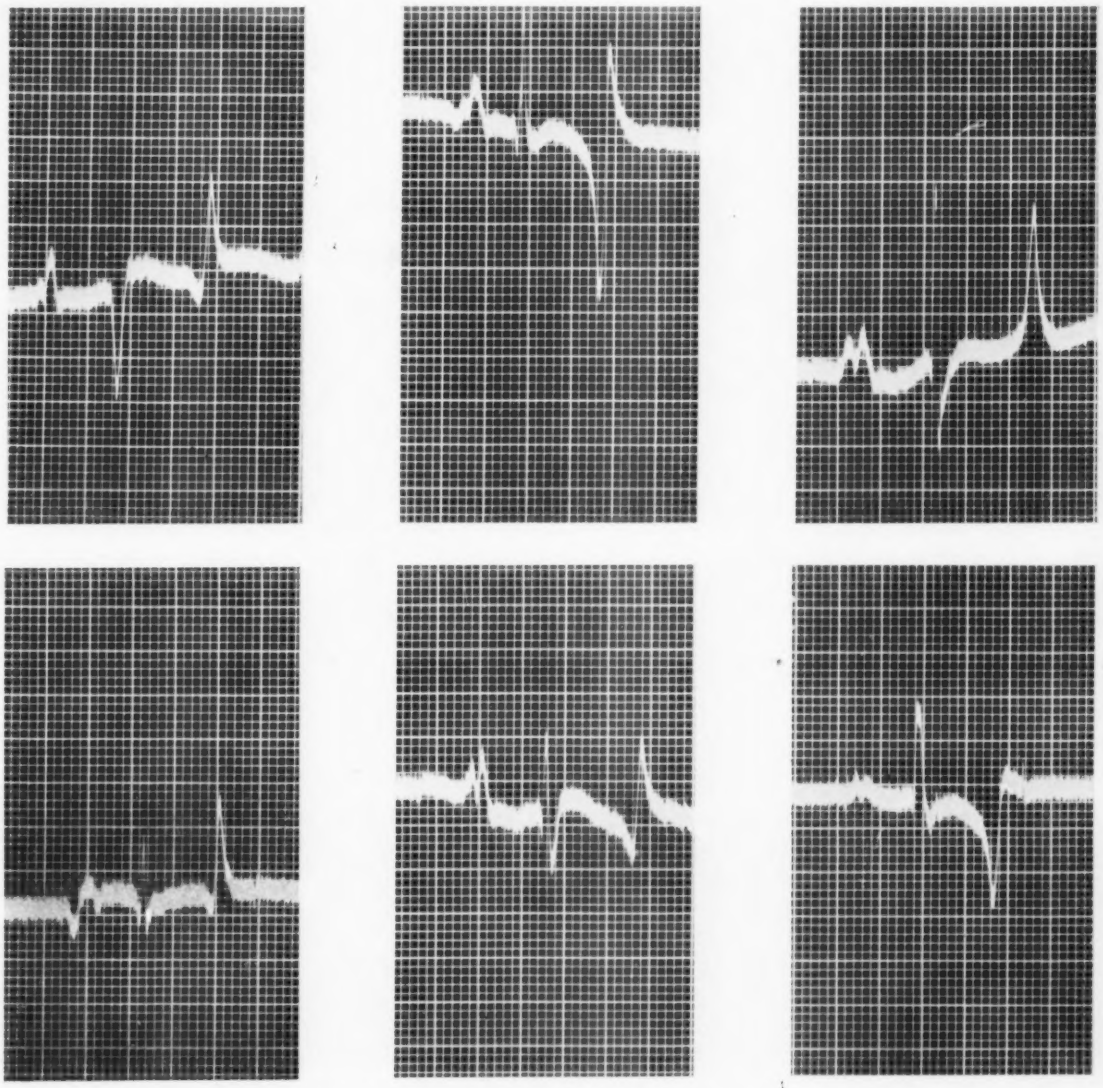
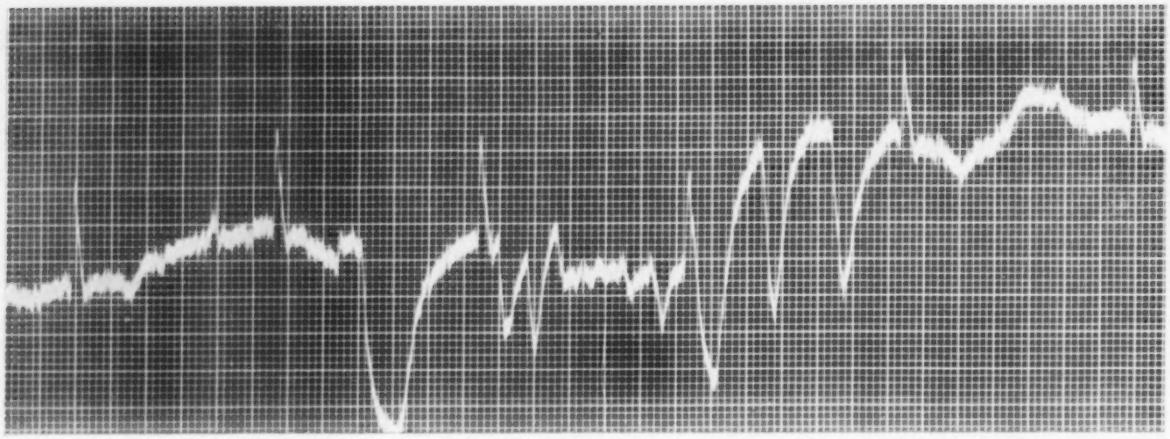


FIG. 5.—Electrocardiograms showing variations from the normal, which are not considered of clinical significance. The P-waves include upright inverted, dicrotic and notched. The QRS complexes show accentuated QR and S-waves. The T-waves show upright, inverted and diphasic types.



A

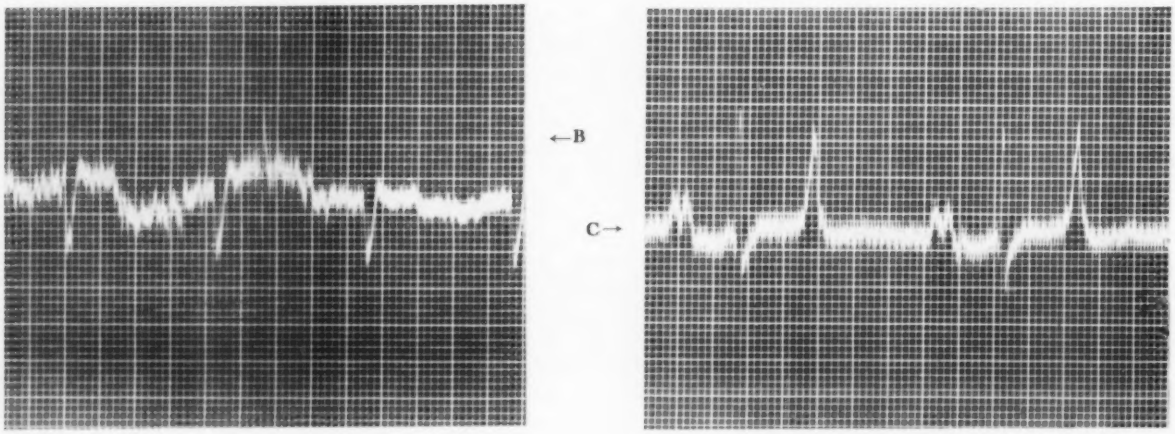


FIG. 6.—Electrocardiograms, showing A, movement of horse; B, muscular tremors; C, AC interference.

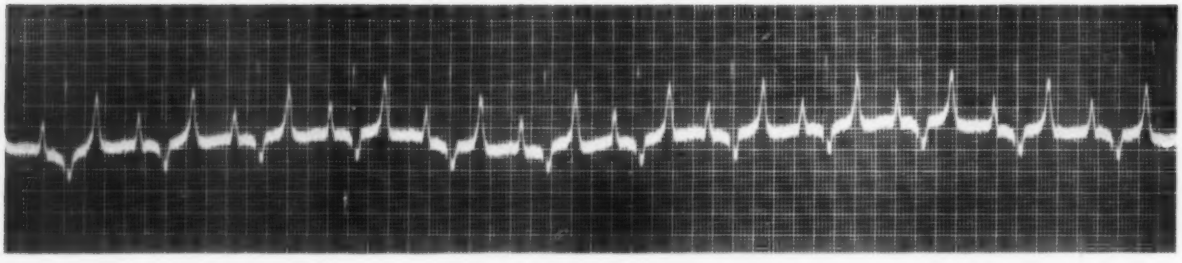


FIG. 9.—Electrocardiograms showing tachycardia; the rate is 75 beats per minute.

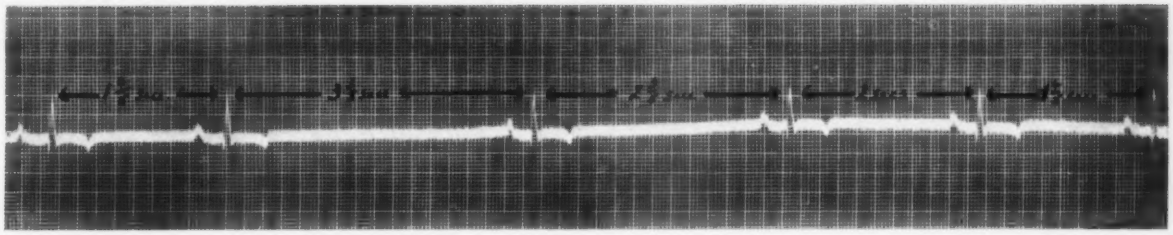


FIG. 10.—Electrocardiogram showing arrhythmia, variations in timing of the heart cycle between 1 4/5 and 3 1/5 seconds.

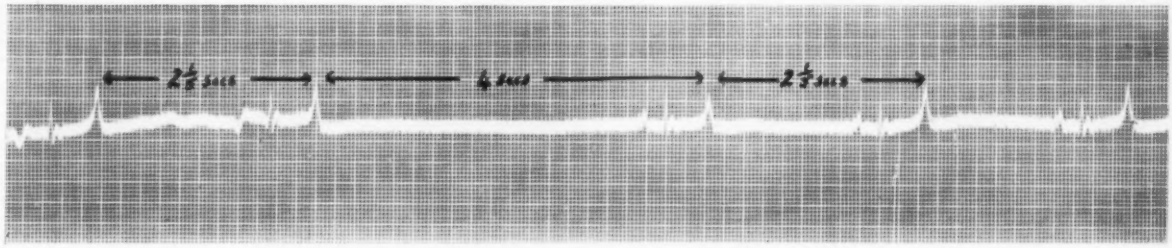


FIG. 11.—Sino-auricular heart block showing failure of a complete cycle lasting for four seconds.

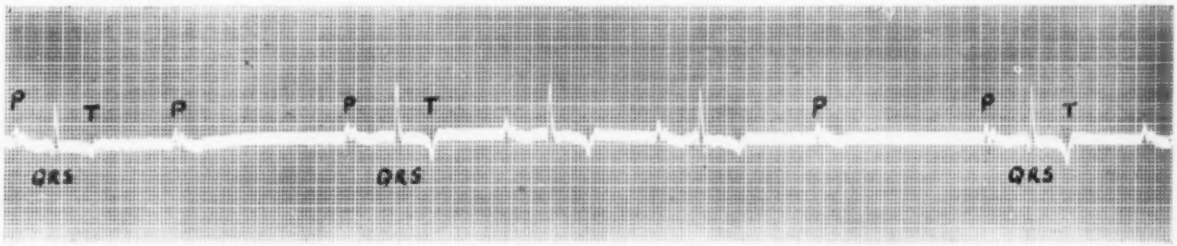


FIG. 12.—Atrio-ventricular or "partial" heart block, showing auricular contraction (a P-wave) not followed by ventricular contraction (QRS complex). This indicates that the A-V bundle has failed to transmit the stimulus.

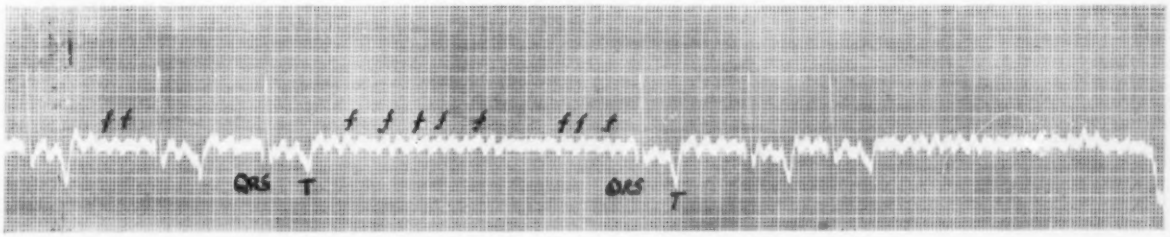


FIG. 13.—Auricular fibrillation. The P-waves have been replaced by a large number of f waves.

after a consideration of each of these seem to warrant the very gravest prognosis. Yet with or even without a rest at grass, some of these heart cases continue to work, win races, or may hunt one or two days a week, and do not fulfil the gloomy prognostication that sooner or later they will "drop down dead." Conversely, horses whose hearts show little or no readily perceptible abnormality are sometimes those which do, in fact, "drop down dead" when least expected.

We do not propose to enter into an account of the complex physiology of the heart beat further than to attempt to give some of the background which underlies an understanding, even though incomplete, of some of the functional irregularities met with during recent years. It is well, however, to remind you that the heart cycle is under the influence or control of a number of separate but beautifully integrated phenomena. A number of important points must be borne in mind :—

(*a*) The heart beat is not initiated in the central nervous system but is a function of the living myocardium.

(*b*) The heart possesses its own complex conducting system which, whether the original initiation of the beat is myogenic or neurogenic, takes control of the cycle and ensures such synchronism of atrial and ventricular function as is required for efficient receipt and redelivery of blood.

(*c*) Practically speaking, all *variations* in the heart cycle are the result of stimuli reaching the heart from the rest of the body by one or other inhibitory or accelerator nerve pathways, from the vagus or sympathetic, or by means of changes in blood composition, pressure, or some other factor.

(*d*) Other things, especially pressures, being equal, the slower the heart beat the greater is the volume of blood discharged per beat.

(*e*) Maximal contraction of the ventricles always occurs if contraction takes place at all ("all or none response").

(*f*) There is no such thing as a partial contraction, and the volume of blood delivered is therefore governed by the degree of filling of the ventricular cavity and the number of beats per unit of time.

These are all important individual items in the phenomenon of the cardiac cycle, which must be borne in mind when approaching the subject of equine cardiology.

Consideration of the Electrocardiogram

The question which has to be answered is "what can we learn about the heart beat from a consideration of the electrocardiogram ?"

At present there is no complete answer, but we will draw attention to certain results and endeavour to suggest their significance.

1. *Rate.*—The E.C.G. provides a permanent record of the rate of the heart beat. Normal heart cycles occupy from about 6 or 7 to 10 or 11 fifths of a second when at rest, but the size, age and general temperament of the horse have to be taken into consideration when examining the heart rate, just as they have when taking the pulse in the usual way. These figures correspond to pulse rates of between about 30 and 50 per minute. Rates of 4 or 5 fifths per beat (75 to 60 per minute) can be regarded as tachycardiac (Fig. 9) and those of as many as 12 to 14 fifths (25 to 21 per minute) as representing bradycardia.

Perhaps the chief value to ourselves is having a permanent, accurate, graphic record of the heart rate which can be filed and referred to from time to time.

2. *Rhythm.*—The E.C.G. gives an excellent graphic record of the rhythm of the heart. All authorities agree that a normal characteristic of the beat is that it should be regular. Consequently, any departure from the normal rhythm is an abnormality and requires further study. The simplest form of arrhythmia (Fig. 10) is seen when there is a perfect heart cycle, with each wave of normal size and amplitude, but showing irregularities in timing which may be only slight departures from the normal or may be markedly variable. To identify this form of arrhythmia, the T-P intervals—or more easily the R-R intervals—are measured in one-fifths and one-twentyfifths of a second and compared with each other over, say, 8 or 10 beats. We believe that in the race horse uncomplicated arrhythmia shown at rest, but disappearing after exercise, indicates a heart which is hypertrophied and under some degree of hypertension. It is encountered in horses which have a history that they went well for the first half or three-quarters of their last two or three races but then "packed up," or that they could not make the final effort in the last one or two furlongs when called upon to do so. These horses may have a slow pulse-rate, perhaps only 30 or 32 per minute at rest. When put on to reduced and regulated exercise or work and given time, some will apparently recover their form and win subsequently.

If this form of arrhythmia is accompanied by a notched P wave, or if it does not disappear after exercise or atropinisation, we feel the case should be regarded as more serious, and a longer rest is indicated. Whether this is a true sinus arrhythmia as recognised in man or not, we are not prepared to say.

3. *Heart Blocks.*—If a horse has a heart block in which by means of the stethoscope or by taking the pulse a so-called "missed" beat can be determined, the E.C.G. is able to give added information. It can be used to distinguish between a sino-auricular block (Fig. 11) where there is a complete absence of both auricular or ventricular recordings and an atrio-ventricular block (Fig. 12), where the auricular complex is not succeeded by the normal ventricular complexes. In other words, at intervals which may be either fairly regular or quite irregular, a P wave is shown, and instead of Q.R.S and T waves following, another P wave succeeds the first, during which period a "missed beat" occurs. We do not yet know the full significance of these two varieties of heart block. We have encountered cases with atrio-ventricular blocks occurring fairly regularly, which disappeared on exercise, and in which no other abnormalities could be distinguished by careful clinical examination. Some of these have subsequently won races or have hunted regularly for one or two seasons. It is important to stress here again that the E.C.G. is only one of several examinations used in cardiology ; it is not by itself capable of giving all the information needed to make a prognosis.

It is, we think, possible to say that if either an S/A block or an A/V block occurs very often and very irregularly in a recording, together with signs of auricular fibrillation or auricular flutter, and especially so if stethoscopy reveals an abnormal heart sound, a grave view should be taken of the horse's capacity for severe or sustained work.

Two other varieties of heart block are known, *viz.*, complete heart block in which atria and ventricles beat apparently quite independently of each other and at different rates, and bundle branch block, which in man has a characteristic wide Q.R.S. complex, but we are not yet satisfied that we have encountered these in the horse.

4. *Auricular Fibrillation or Flutter* (Fig. 13).—Probably these conditions are commoner in horses than is often realised. Both are potentially serious for obvious reasons, although it is surprising to find that some affected individuals appear to suffer little functional disability under normal conditions, provided these do not make sudden or prolonged demands

upon cardiac reserves. They are capable of slow regular work, but are unable to withstand the stress of racing or hunting.

Characteristically, in both conditions, which are probably different degrees of the same functional disability, the P waves are replaced by a series of new waves—sometimes called "f waves," resulting from irregular and uncoordinated contractions of portions only of the atrial musculature. In fibrillation of the atria, the f waves are shown as only relatively small and rapid deviations from the isoelectric line on the E.C.G., while in flutter the deviations are greater and slower. Heart beat cycles tend to be irregular in rhythm as a rule, as would be expected from a consideration of the mechanics of the heart beat. There may be other concurrent abnormalities as well.

Donald (1948) has pointed out that he has encountered fibrillation in Clydesdales, some of which followed influenza, and among others we have had one case under observation for 18 months in a Suffolk mare which followed upon an unfortunate series of febrile conditions following a difficult foaling. Septic metritis (streptococcal), acute laminitis, and finally tetanus supervened. Recovery, apart from the residual fibrillation in the heart, was complete. The mare is capable of slow regular chain work, but becomes distressed when put to heavy carting work.

Conclusion

We have made no pretensions in this paper that we could present a comprehensive account of the whole subject. Many aspects which are highly controversial have been omitted, and very much more speculation could have been introduced.

From the work done on straightforward recordings, recordings before and after exercise, and after atropinisation cholinisation, and the use of other agents with specific cardiac actions, more evidence is available, and doubtless much more will accumulate in future.

We feel that enough experience has been acquired to indicate that, taken in conjunction with other examinations, the E.C.G. can furnish factual records of importance in reaching a diagnosis and prognosis of the conditions of the heart in horses.

References

Donald, D. E., & Elliott, F. J. (1948.) *Vet. Rec.* **60.** 473.
Lewis, T. (1912.) *Heart.* **3.** 161.
Mettam, R. W. (1928.) *Union of S. Africa, Dept. of Agric. Rpt.* **13 & 14.** 745.
Steele, J. D. (1949.) *Proc. Internat. Vety. Cong.* Sect. 6 (*e*).

DISCUSSION

The Chairman said that the paper had been most fascinating as well as the two authors' remarks and their comments on the slides. The paper was now open for discussion.

Lieut.-Colonel D. F. G. Smith (Porton) wished to pay tribute to a most interesting paper which had contributed much information we needed on the horse's heart. Unfortunately he had no experience of the E.C.G. but he was interested in the cause or origin of the various arrhythmias one found in the equine heart from time to time. Some years ago he had read Sir Thomas Lewis's book, "Clinical Disorders of the Heart Beat" (at that time fortunately there were still considerable numbers of horses in the Army that could be examined), and he decided to try to find out, for his own satisfaction, how it was these arrhythmias arose—*i.e.*, whether they could be traced perhaps to a toxic cause or whether they were stress conditions associated with military service. He had found if individual examinations were made of large groups of horses in regular work—for example, those in a cavalry or artillery regiment—that most horses had normal rhythmic hearts. One did find, however, that a small proportion had certain abnormalities such as intermittence or so-called "dropped beat" which was possibly a minor form of heart block. Another not uncommon defect seemed to be the duplicated first heart sound (lŭb), and more rarely the doubled second sound (dŭp)—due presumably to asynchronisation of the left and right ventricles, and the A.V. valves and semilunar valves of the two sides of the heart. Such abnormalities were seen at rest and would disappear with light exercise, and the horses concerned were well reported on by unit commanders.

Continuing, Colonel Smith said he had found it interesting to observe the effects upon the heart beat of severe febrile toxic diseases such as equine influenza when they occurred in epidemic form. About the 19th day after onset, when fever had subsided and the heart beat had dropped to about 50 to 60 per minute, one often found abnormalities in the heart cycle, most of which would disappear later in convalescence, though some remained. There seemed to be about four types of such arrhythmia and one or more of them could be combined in the same heart picture. There was the duplicated first or second heart sound already mentioned. Secondly, regular or irregularly occurring intermittence (dropped beat). Thirdly, there was the incomplete heart cycle—*i.e.*, a series of normal heart beats after which came a normal first sound (lŭb) but *not* followed by an audible second (dŭp). A pause occurred before the next series of normal beats was resumed. If the authors had seen this condition he would be grateful if they could throw some light on it, since it did not seem to occur in man. The fourth type of arrhythmia was the extrasystole or premature contraction. In his experience this condition was rare in the horse but when it did occur there were sometimes clinical symptoms associated with it—an important point since most of the minor irregularities of the horse's heart did not often induce clinical signs. In two cases of D.A.H. sent to veterinary hospital he had noticed that both had extrasystoles at rest. They were suspected to be heart cases because they had periodic attacks of vertigo—falling down in the stable as if in a faint. Yawning was noticed sometimes before one of the animals fell down. Before exercise the heart picture was much the same in both horses: a series of normal beats and then three or four extrasystoles followed by a longish pause, again a normal series of beats succeeded either by extrasystoles or by the incomplete heart cycle, *i.e.*, a lŭb but no dŭp. During and after exercise there was *no* respiratory distress but intermittent periods continued while the heart rate was accelerated. The extrasystoles, however, disappeared temporarily. Eventually the two horses were destroyed but no visible abnormalities were seen on *post-mortem* examination. One heart gave the impression of being enlarged for the size of horse it came from.

It seemed reasonable to suppose that these arrhythmias of the horse's heart were toxic in origin. The tone and efficiency of the myocardium was affected in animals debilitated by disease, and in some way the conducting mechanism of the heart was damaged. With regard to the stress or strain disorders, the condition of particular interest to him was rupture of the heart usually (though not always) associated with fast work. He had seen several cases of ruptured heart in polo ponies, mostly in hot countries. Nearly always it was the right auricle which gave way. Often the horse affected was in perfectly good condition, a proved performer and in no way suspicious of heart disease. He had always been mystified why apparently healthy heart muscle should rupture, since cardiologists would say that normal healthy heart muscle did not give way. He felt, however, that the authors of this paper might have given a clue as to why this sometimes occurred, by mentioning the significance of partial thrombosis of strongyle origin at the opening of the right coronary artery. If infarction did occur one might expect the right auricle to rupture under stress. The last case of rupture he saw was at the recent Roehampton Cup when a very high class polo pony, 11 years of age, in perfect condition, collapsed and died during a not particularly fast chukker and the player was only a light weight. *Post-mortem* examination showed rupture of the auricle. He would be glad if the writers of the paper or others could comment on the question of ruptured heart.

Reference had been made in the paper to the question of hypertension in the horse. He would like to ask if a satisfactory method of measuring blood pressure had yet been evolved. One could not get a true picture unless some assessment of pressure could be made. The only evidence, he felt, that one could possibly get of a rise in pressure might be from the nature of the heart sounds. He had noticed in the case of horses which had undergone prolonged stress in wartime that the second sound (dŭp) sometimes was much accentuated and could be heard over a large area of the chest wall.

Mr. J. S. M. Cosgrove, M.R.C.V.S. (Dublin), said that the little he thought he knew about the heart had been knocked out of him since he had acquired a little experience of the E.C.G. This again

had been very forcibly shown to him since listening to that extremely interesting lucid lecture by Professor Miller.

From a practical point of view he thought a very important point regarding the examination of horses for soundness had come out of that lecture. He had in mind the interpretation of the "missed" heart beat one came across so frequently in the examination of the heart. Were they to pass the horse sound and make no mention of this, or were they to spin the horse for being unsound of his heart? From what he had seen and heard, undoubtedly the E.C.G. had given them the answer to this important question and Colonel Hickman had told them that where the missed beat was due to a sino-auricular breakdown it might be of importance but where it was due to an auricular ventricular breakdown it was of no importance.

Working recently together with a well-known cardiologist who had provided the E.C.G. he had taken tracings of a number of horses. He had worked with only two leads; lead one was placed over the apex beat of the heart on the left side, and the terminal of lead two was placed about 2 inches behind the point of the shoulder of the off side. Excellent tracings were obtained by this method.

Case 1 was a rather valuable thoroughbred horse being examined for soundness in which a partial heart block was noted, the E.C.G. tracing indicating the auricular ventricular partial block gave him the utmost confidence in passing the horse sound.

Cases 2 *and* 3 were carried out on behalf of the Stewards of the Irish Turf Club. Case 2 concerned a rather brilliant young 'chaser who had won his three previous races but during his fourth race in which he was a hot favourite he pulled up, despite the efforts of the jockey to keep him going, after about a mile of the race which was run over 2 miles. Public opinion, of course, had it that he had received a "stopper dope." Examination of the heart with the stethoscope immediately after the race revealed the heart to be in a very distressed state with a weak thready irregular pulse. The E.C.G. examination carried out the following day revealed a very definite tracing of auricular fibrillation.

Case 3 was of a 10-year-old horse which had been rather brilliant but subsequently had been running very indifferently. E.C.G. examination in this case revealed an irregular flutter associated with a partial heart block. It was interesting that this horse appeared to be better over a distance of 3 miles than over 2 miles. One other case which he did not diagnose and which would have been ideal for E.C.G. was of a brood mare heavy in foal which developed severe symptoms of colic which he thought was due to mesenteric thrombosis. Heart rate and pulse were extremely rapid, thready and weak. The *post-mortem* examination which was carried out showed it to be a clear case of coronary thrombosis. He felt guilty he had not distinguished the pain of coronary thrombosis from mesenteric colic.

He would again like to congratulate Professor Miller and Colonel Hickman on the excellence of their paper and the graphically clear explanation of their numerous slides.

Mr. C. G. Farmer (Melton Mowbray) said the first case he would mention was a case of marked tachycardia in which he suspected the presence of a brain tumour. The heart rate would rise suddenly to 100 or 120, fall rapidly to around 60 and then repeat the rise. The animal was put down and he carried out a *post-mortem* examination on the brain and found psammoma there. He had another case about a year later which also proved to be a psammoma on the brain. One could attribute the breaking of blood-vessels to systolic incompetence. Usually a horse did not work so well at speed and a small clot of mucus from the nose, bloodstained, would be shown when the horse had settled down again in stable. This might happen only occasionally in the early stages, but sooner or later such cases developed a slight systolic murmur. As it got worse with fast work, the incidence and severity of the blood-vessel breaking increased. Any case which he examined which showed the slightest systolic murmur, if it was a racehorse, he did not consider safe to pass, as sooner or later it would start breaking blood-vessels. A hunter could hunt for three or four years with a definite systolic murmur.

With regard to the examination of horses he found it difficult to know what to do when one got a suspected sino-auricular block or a horse which had an irregular beat while in the box but lost it as soon as it trotted into the yard. As soon as one mentioned any abnormality about a horse's heart it damaged him for the rest of his life and one had to be very careful. He always had difficulty in deciding whether he should mention it or not but he did not think an irregularity of that type was of any importance at all. He was interested in the picture of the aortic clot and aneurysm. He had a case of a ruptured aortic arch some time ago and the only thing he could find clinically was a peculiar rustle after the diastolic sound and when the horse died suddenly he found at *post-mortem* that it had a ruptured aorta. He attributed the majority of heart troubles to verminous invasion and he had almost always been able to find a verminous aneurysm somewhere in the abdominal circulation in such cases.

Reply to Discussion

Mr. W. C. Miller, in reply, said that one point which Colonel Smith brought out and which perhaps should be emphasised was that by any one method of examination one was liable to miss something which might be revealed by other methods. He did not want to give the impression that E.C.G. was more than one of the several aids to a better knowledge of the function of the heart.

With regard to arrhythmias, they were considered as being of two origins, the functional arrhythmia which was purely functional and often associated with hypertrophy, and toxic arrhythmia which Colonel Smith mentioned.

The thoroughbred and hunter were selected types of horses and the hearts of these animals had to carry bigger burdens of work than hearts of food-producing animals or heavy carthorses. It was not surprising that hypertrophy was encountered not infrequently. It was possible to get hypertrophy to such an extent that the heart could weigh 12, 13 or 14 lb. instead of 10 or 11 lb., and in addition there could be "hypertrophy of function," so that the heart acquired greater power in its beat. This was one of the objects of training —to increase cardiac power and reserves. If the training system had been too impatient, if enough time had not been given and if the horse had courage enough to make extra effort, it was not difficult to appreciate how the process of that hypertrophy came about. If dilatation of the aortic ring took place during this hypertrophy, semi-lunar valve incompetence could occur, since the valve edges could not meet each other on the termination of systole.

Toxaemic arrhythmias might result from similar circumstances. Extra demands were made of unfit hearts which became embarrassed and arrhythmia developed afterwards.

Rightly or wrongly, he and his co-workers regarded a missed beat, so-called, at rest which disappeared on exercise or after giving the horse atropine or choline, as of not much significance, but a missed beat continuing to show after the horse had been exercised was more serious. They were not too dogmatic about any of these statements, they wished to be cautious, but such experience as they had had, fitted in with that suggestion.

On the question of hypertension and blood-pressure, they had not devised any means of determining what were the normal arterial or venous blood-pressures in a horse. A method was needed whereby the blood-pressure in the unfit horse could be taken. None of the human apparatus could be used because there was no area of the horse's body where a large blood-vessel lay between the skin and a hard skeletal structure, nor could complete muscular relaxation be obtained. The very valuable information which might come from some means of recording blood-pressures was not available at the present time.

He had recorded what Colonel Smith had mentioned, the type of heart beat in which the second sound was strong, harsh, even "tinkling"; the heart beat could be felt quite well, and might become intensified after 10 minutes' exercise. It would be most helpful to an understanding of this kind of heart beat if simultaneously arterial and venous pressures could be recorded.

He was interested to hear Mr. Cosgrove's contribution to the discussion. He was impressed with the seriousness with which he viewed his own inability to make a diagnosis. It was extraordinarily difficult to differentiate the pain and symptoms of colic from those of coronary thrombosis.

With regard to auricular fibrillation or flutter, he thought they were right in saying that all the cases they had had definitely followed some infection, including fever, influenza or strangles, etc.: the animals had been seriously ill at an earlier date. They were watching one animal which had a heart beat of that sort 18 months after recovery from the acute condition. Whether it would recover or not remained to be seen; presumably it depended on the degree of damage.

Mr. Farmer's contribution on psammoma causing fibrillation was very interesting; they had not come across anything like that as yet.

Lieut.-Colonel J. Hickman, in reply, said that when a horse was examined for soundness and a "missed beat" was detected the question arose as to the cause. To his mind there were four causes and the best and perhaps only way to differentiate them was by taking an electrocardiogram.

Firstly, there was the sino-auricular block in which the pacemaker failed to respond. They had had a few of these cases but he was not sure of the prognosis although the cases seen had recovered. The next type was the case in which the auricles contracted but the stimulus was not picked up by the A/V node and in consequence the ventricles failed to contract. This was shown on an electrocardiogram by individual P waves. This condition of partial heart block if unaccompanied by any other cardiac abnormality that one could detect clinically, was of no significance if it disappeared on exercise. Several horses had been seen with partial heart blocks which were still winning races and hunting regularly.

Concluded at foot of col. 1, *page* 696

COLOUR FILMS OF MAJOR OPERATIONS ON SMALL ANIMALS

It is a great testimony to the success of the experimental introduction of colour films of operative procedure into last year's Congress programme that, at Harrogate, a new series was selected as the sole substitute for that time-honoured feature "Demonstrations." Some may have missed the informality of the old-style straw-baled show ring, but all seemed vastly content to sit in the comfort of an actual theatre seat giving (in place of an occasional glimpse of the operators, let alone the subject) an uninterrupted view of delicate manipulative processes.

The Association again was indebted to Professor J. B. Buxton, Principal of the Royal Veterinary College, for facilitating the exhibition of their films, which were shown to a large and appreciative company at the Royal Hall, Harrogate, on the afternoon of Friday, September 12th. The commentary was given by Mr. Gordon C. Knight, F.R.C.V.S., and the chair was taken by Mr. J. O. Powley, M.R.C.V.S.

The following films were shown:—

(1) Closed circuit cyclopropane anaesthesia with muscular relaxation ("Brevedil," M. & B.).

(2) Partial reduction of intussusception, bowel resection and end-to-end anastomosis.

(3) Transthoracic oesophagotomy for relief of impaction.

(4) Intracapsular extraction of the crystalline lens.

(5) Caesarean section.

Film No. 1 was a demonstration by Mr. L. W. Hall, B.Sc., M.R.C.V.S., working at the Royal Veterinary College with the aid of an Animal Health Trust Training Scholarship award.

Film No. 2 was produced by Mr. E. R. Roberts, M.R.C.V.S., Department of Surgery, Royal Veterinary College, London, and the others by Dr. Peter N. Cardew, St. Mary's Medical School, London.

The surgical operations were by Mr. Gordon C. Knight, F.R.C.V.S., assisted by Miss Audrey Johnson, M.R.C.V.S., and Miss Barbara Weaver, M.R.C.V.S., all of the Beaumont Animals' Hospital, Royal Veterinary College, London. In addition to his demonstration in Film No. 1, Mr. L. W. Hall was the anaesthetist at the operations shown in Films Nos. 3, 4 and 5.

Discussion

In the short discussion which followed, Mr. P. S. Hastie (Ashford, Kent) complimented Mr. Knight on the showing. In regard to the film on transthoracic surgery it had been said that the oesophagus was free from the mediastinal attachment. Was it moved back separately?

It was said in relation to the demonstrated extirpation of the lens that the sight of the dog operated upon had been restored. If removal of the lens in human surgery was to be successful and if sight were to be restored to any normal degree of accuracy the use of spectacles or contact lenses was necessary, and without them the patient could only distinguish between light and dark. It was also said that before the cornea was sutured time was given for the anterior chamber to fill. Did the cornea when placed back in position adhere very rapidly, edge to edge, and prevent further flow of the newly formed fluid in the anterior chamber?

With regard to the caesarean section, did Mr. Knight always advise only the one incision as demonstrated and did he think that the incision made near the cornea was not fraught with any danger of contraction where the two horns joined?

Mr. Knight replied that the answer to the first question was Yes: the oesophageal mediastinum was sutured separately. That technique had not always been adopted but it probably would be in future. If the mediastinal pleura could be lifted from the oesophagus the operation was facilitated.

As to removal of the lens, it had to be remembered the dog's vision was peripheral by comparison with the human being and it was for this reason the animal did not require glasses after lens extraction. It was fact that, if the lens could be removed with minimal damage to the bulb, a dog could be given extraordinarily good vision. Mr. Knight said he could offer plenty of evidence for this.

With regard to suturing the corneal wound, sometimes three or four minutes was allowed for the aqueous humor to re-form and so restore some symmetry to the bulb. In suturing there might be a certain amount of aqueous loss again; nevertheless, asymmetrical union would have been largely prevented.

On the question of caesarean section he had never employed two incisions but that could be a matter of habit. In certain cases perhaps it might be said two incisions would prove advantageous. Speaking from experience, the low incision was found suitable and the foetuses could be moved round from one horn towards the other. As to the question on danger from contraction Mr. Knight said he had no evidence that a higher incision was an advantage.

Mr. W. B. Quarmby (Beverley) asked whether Mr. Knight preferred the end-to-end, as against lateral, anastomosis? With dislocation of the lens in the dog, was there any method of preventing escape of vitreous humor? Also, how often did he encounter escape of vitreous humor in the operation demonstrated? Mr. Quarmby added that he did not understand what type of anaesthesia was used in the eye operation.

Mr. Knight answered that end-to-end anastomosis worked provided the technique was reasonably good. The advantage was that this operation could be accomplished in probably a quarter of the time required for the lateral anastomosis which seemed comparatively cumbersome. Mr. Knight said, however, his experience with lateral anastomosis had been largely on cadavers.

On the question of lens dislocation he could see no means of preventing vitreous loss if the lens were removed via a corneal incision. Loss of vitreous was regarded as a bad sign in human lens extractions but in dogs it did not mean failure. The anaesthetic used in the filmed operation was cyclopropane.

Those were the two main types of heart block. Clinically, auricular fibrillation was suspected when there was an irregular missed beat, *i.e.*, one which did not occur regularly after every third beat, for example. However, one could not be absolutely sure what caused the missed beat without taking an E.C.G.

The S/A block and partial heart block were hopeful and without great significance but auricular flutter and fibrillation were hopeless except that animals so affected might perform a certain amount of light or regulated exercise. They would not recover and go back to racing or the hunting field and do the work which had been expected of them in the past.

The Chairman moved a vote of thanks to Mr. Miller and Colonel Hickman for their paper and demonstration. This was accorded with acclamation.

Miss L. H. H. Phillips (Haslemere) asked what material had been used to suture the cornea back into position.

Mr. Knight replied it was No. 6/o Mersilk, a synthetic suture which had no capillarity.

Mr. H. F. Hebeler (Langport) thanked Mr. Knight very much for the demonstration of his surgical prowess and the film-producing powers of those associated with him at the Royal Veterinary College. Was cyclopropane the anaesthetic used in the caesarean section operation, and did that affect viability where one desired to have live puppies? What did Mr. Knight regard as the anaesthetic of choice for this operation for a practitioner who could not afford such expensive types of apparatus, and what were his views on the use of pituitrin intramuscularly before commencement to suture the uterus after a caesarean section operation?

Mr. Knight replied that the anaesthetic used was cyclopropane which was possibly the best in the circumstances. He did not think it would affect the viability of the foetuses. It was difficult to say what he would use instead but probably ether with some form of premedication. He did not as a rule use pituitrin but ergometrine.

The Chairman, in bringing the discussion to a close, thanked Mr. Knight for having shown them such interesting films and for answering the questions. By attending, they had all lost nothing but gained very much. It was understood that quite a number of members had left that morning, thinking that the films would be the same as those shown last year. It was a great pity that the programme had been misread in that way because it stated that the films to be shown were new ones. Those present, however, all wished to thank Mr. Knight most warmly for giving them the benefit of seeing how the job should be done. (Applause.)

Mr. Knight, in briefly acknowledging the vote of thanks, said that he believed his own part (that of surgeon) in the operations which had been demonstrated was quite a small one. He had received invaluable help from his colleagues at the Beaumont Hospital and from others who had played the all-important and laborious parts in producing the films.

* * * * *

SWINE FEVER: THE 1952 CONGRESS EXHIBIT BY THE VETERINARY LABORATORY, WEYBRIDGE

(N. H. HOLE)

The available space for the Laboratory Exhibit at Harrogate this year was restricted, so Weybridge confined its demonstration to one subject, swine fever, the incidence of which has recently shown a rather alarming upward trend.

Four aspects of this disease were dealt with, namely, incidence and effect, the lesions, diagnosis, and control by crystal violet vaccination. Under incidence and effect was included a record of the number of outbreaks confirmed annually since 1942, demonstrating a marked increase in recent years ; 1952 promises to yield the greatest number in the past decade. The inclusion of Animal Health Leaflet No. 20 may have been regarded by some as rather beneath their professional dignity, but it was illustrated chiefly to emphasise, we hope quite unnecessarily, that dealing with swine fever entails certain legal obligations under the Diseases of Animals Act.

A selection of mounted specimens showed the considerable range of lesions seen on *post-mortem* examination, dependent on the degree and nature of secondary invasion and the stage of infection at death.

Under diagnosis was explained the use of histological examinations of nervous tissues, a method that Weybridge is testing out in conjunction with the Animal Health Division. Diagnosis by the examination of visceral specimens at the laboratory has never been more than partially satisfactory ; the true lesions of swine fever may be so rapidly obscured by secondary changes. We have hopes that we shall find the histological examination of brain tissue will result in more definite diagnoses and fewer " further investigations."

Finally, the preparation and use of crystal violet vaccine were described and illustrated, and the steps taken to ensure potency and safety. The immunity obtained by its use lasts at least one year, and there is no doubt whatever that in this country it has proved a very satisfactory means of prevention ; it should be more widely used.

The demonstration and stand were planned to occupy a central position ; the internal lighting and general layout were a new departure for Weybridge. We were pleased with the result. It was disappointing to find that the space difficulty at Harrogate necessitated it occupying a side position in the hall. This tended to break the continuity of the legends and demonstrations.

The Local Society

The Yorkshire Veterinary Medical Society is one of the oldest Divisions of the B.V.A. It was founded on Friday, October 9th, 1863, after a circular suggesting the formation of an association had been sent to all veterinary surgeons practising within 50 miles of Leeds. The meetings still take place on Fridays under a constitution and rules of procedure which have largely persisted from this first meeting. Mr. E. C. Dray, later a President of the R.C.V.S., was elected the first President of the Society and the Hon. Secretary was Mr. W. Williams, who afterwards left practice and devoted his professional life to the education of veterinary students at the new Edinburgh Veterinary College.

One of the original rules which failed to stand the passage of time required the payment of a fine of 1s. if a member was absent or more than 30 minutes late for a meeting, unless prior notice had been given, while the delinquency of an officer cost him 5s. The President was empowered to call on any member to provide a paper for discussion at a meeting but the essayist was allowed to choose his own subject. The list of subjects debated would prove quite applicable nowadays, for as well as clinical material, attention was paid to professional ethics, veterinary education, the rôle of the profession in meat inspection as well as criticism of the Board of Agriculture in its methods of control of rinderpest. contagious bovine pleuropneumonia, glanders and rabies.

One of the earliest meetings was a special one called to discuss cattle plague and reference is made to a report of 1747 which suggests that the disease afflicted Yorkshire for four years and 15 out of every 20 cattle were carried off. This meeting adjourned to inspect a cow at the abattoir with zebra markings on the rectal mucosa—opinion was divided as to whether the disease was present or not. A later meeting adjourned to carry out a detailed *post-mortem* examination of a cow with splenic fever—the anthrax bacillus received little respect in those days and it was years afterwards that members were advised to cut off the ear of a suspected animal, put it in their pocket and carry out a microscopical examination at home!

With few exceptions the meetings have been held in Leeds and at one time this was enforced by a rule. Regular attendances of members from London, Edinburgh, Liverpool and Manchester were a feature of these more leisured times and a meal nearly always followed the business meeting. The Society has guarded the interests of its members continually and provided financial support to the Mutual Defence Society and the Royal College of Veterinary Surgeons. Nor was its charity lacking at home for one reads that after a long and serious illness one member was presented with " a purse well filled with gold " by his more fortunate brothers.

The Yorkshire set up a precedent in publishing its scientific papers and proceedings in the veterinary journals of the day and this practice has been followed by others. As early as 1872 the necessity for a weekly veterinary publication was being debated.

Many members on removal to other parts of the Kingdom were instrumental in assisting the establishment of the younger territorial societies and as well as providing many officers of the Royal College of Veterinary Surgeons—13 Presidents of the R.C.V.S. have been members of the Society—it has a lengthy list of former hon. associate members. Without being in any way complete such names as Professors Axe, Sir John M'Fadyean, Penberthy, Pritchard, Walley, W. Williams and W. O. Williams come to mind, along with William Hunting, Dr. Fleming and more recently Dr. O. C. Bradley.

The Society has functioned throughout times of war and difficulty and now with a membership of well over 100 it looks forward to its centenary and the more distant future with just as much confidence and faith in the profession as possessed its founders.

K. G. T.

THE SOCIAL EVENTS

The Yorkshire Veterinary Society "At Home"

The eve of Congress reception held by the Yorkshire Division at the Hotel Majestic on Sunday, September 7th, enabled that Society to fulfil to perfection the traditional rôle of the host Division of the Association in providing a social meeting ground for the arriving members and delegates and their ladies. The attendance was remarkable even for this time-honoured event and the spacious rooms were crowded when the President of the Yorkshire Division, Mr. H. B. Allan, of Harrogate, welcomed the Association on behalf of the Society, saying that they were very pleased and privileged to have the Congress in Yorkshire this year and, on their part, would put forth every effort to make it a success. He hoped that while they were in Harrogate they would take every opportunity to see the manifold attractions of the place, while those who would like to see something of the county's most beautiful scenery would be well advised to take the excursions arranged to Fountains and Bolton Abbeys. He hoped that little occasion would mark the opening of a very pleasant and fruitful Congress. (Applause.)

The President of the B.V.A., Mr. A. J. Wright, responding, said he was sure it would be their wish that he should thank the Yorkshire Division for that delightful " At Home." The President and members of that Society had given the Congress a marvellous send-off. (Hear, hear.) When the " Yorkshire " first gave the Association an invitation to come and hold its Congress in Harrogate they all knew that they were in for a thoroughly good time and he could assure their hosts that that " family gathering " portended a very happy week. On behalf of the British Veterinary Association he would like to propose a vote of thanks to the Yorkshire Veterinary Society for their great and most hospitable welcome, and for an evening which augured well for a very happy week in Harrogate.

The President's remarks were received with enthusiasm by the company, who stayed until late in the evening in full enjoyment of this opportunity of renewing old friendships and making new ones.

The Civic Reception

In common with what we had the opportunity of seeing of the other major buildings of Harrogate, the Lounge Hall—so happily named for its main purpose—is a delightful place, especially when decked out for such an occasion as the Civic Reception held there on the evening of what, strictly speaking, was the opening day of our Congress, Monday, September 8th. And to receive the large company, with our own most popular President and his lady, were, as befits the town, two very charming dignitaries in the Mayor and Mayoress, Councillor and Mrs. Milton. It is only by this time that attendance at Congress is really complete, consequently all were glad of the further opportunity to foregather and talk without the diversion of cabaret and, having looked up everyone, of availing themselves of the admirable floor to the music of the excellent municipal dance band. The appreciation of

Graham Powell, 35, James Street, Harrogate.

THE CIVIC RECEPTION
(Mrs. Wright and the President; Mrs. Milton and the Mayor).

Photo by courtesy of the Proprietors of "The Yorkshire Post."

Group at Reception Prior to the Annual Banquet, B.V.A.

Top row, L.-R.—Sir Patrick R. Laird (Secretary, Department of Agriculture for Scotland), Lady Turner, Sir James Turner (President, National Farmers' Union), The Mayoress of Harrogate, The Mayor of Harrogate (Councillor A. V. Milton).
Second row, L.-R.—Mr. Alan J. Wright (President, B.V.A.) and Mrs. Wright, the Rt. Hon. Sir Thomas Dugdale, M.P., Minister of Agriculture and Fisheries, and Lady Dugdale.

its members for this hospitable feature of the programme and the great welcome accorded by the Mayor and his Borough was voiced on behalf of the Association by our President and acknowledged in equally felicitous terms by His Worship Councillor Milton.

. . . . .

The President's Reception

Over 500 members of the Association, their ladies and other guests—an unprecedented number—crowded the spacious reception rooms of the Hotel Majestic, Harrogate, on the evening of Tuesday, September 9th, in order to demonstrate by their presence their appreciation of and affection for a hard-working and able President in Mr. Alan J. Wright, of Macclesfield, and his at least equally self-sacrificing and popular partner, Mrs. Wright. The programme was informal, the dance delightful and the spirit of the occasion such that Mr. Hodgman, the Senior Vice-President, had but to refer to the prevailing happiness and gaiety to strike just the right note in voicing the appreciation of the immense company for such generous hospitality and so wonderful a time.

V.V.B.F. Ladies' Guild "Coming-of-Age" Dance

Professor Wooldridge's Tribute on a "Special Occasion"

On Thursday evening, September 11th, the annual dance took place, when the V.V.B.F. Ladies' Guild were honoured with the presence of Monsieur and Madame Boussac and party. A crowd of enthusiastic and merry people danced till 1.30 a.m. The proceedings included a most successful raffle, organised by Mr. Adams, of Bradford; numerous prizes were distributed to the lucky winners. This was followed by a presentation of a spray of pink carnations to Mrs. Simpson, of Maidenhead, by our President, Mrs. Wright. The President brought to the notice of the dancers the fact of this being a "coming-of-age" celebration. Then Mrs. Simpson came forward and the cake was wheeled in, with a posy of 21 candles arranged as a bouquet and tied with the colours of the R.C.V.S. After blowing out the candles Mrs. Simpson cut the cake amidst great applause. An oak shield bearing the Coat of Arms of the Royal College was taken from the cake and presented to Mrs. Simpson; also a parchment book commemorating the

21 years of the Guild and the members who took part in its meetings. This was handed to Mrs. Simpson by Mrs. George Wooldridge, first having been autographed by every lady present at the annual meeting on Tuesday morning.

Professor Wooldridge then responded to a request for a few words from him, saying: "As Vice-President of the Victoria Veterinary Benevolent Fund it is my duty and very great pleasure to express the great appreciation of the parent body to the Ladies' Guild, its President (Mrs. Alan Wright), officers (Mrs. Glover and Mrs. Hill-Owens) and members, for the marvellous work done on behalf of the Fund. Their efforts have permitted much needed relief to be given to many very sad and necessitous cases amongst aged and other unfortunate members of the profession and their near relatives—widows and children.

"To-day is, as most of you know, a very special occasion for it is the Guild's 21st birthday. It seems incredible that it is so long ago that its founder—the late Colonel P. J. Simpson—with his wonderful intuition and foresight, invited a number of ladies, wives, sisters and daughters, and members of the profession, to form a Guild to assist the Fund in raising the wherewithal for increased relief in many sad cases. He little knew to what great heights the Guild would attain. And may I emphasise the great welcome we all extend to-night to the first President of the Ladies' Guild, Mrs. Percy Simpson—(loud and prolonged applause)—who has heroically overcome great difficulties to be present with us now. Mrs. Simpson hopes you will forgive her for not speaking—she doesn't feel equal to it. She congratulates the Guild on its great success and trusts it will long continue its good work. She also asks the President to accept on behalf of the Guild a memento of her husband, its founder. The memento consists of a very beautiful ivory gavel and a round plaque with a suitable inscription to enable the President to keep order at the various meetings."

Mrs. Simpson then presented the memento to the President, who gracefully acknowledged it and expressed the delight of the Guild and all those present that Mrs. Simpson had been able to be present with them that evening. It was very gratifying that their first President should be with them on the Guild's 21st birthday.

Mrs. Simpson then cut the 21st birthday cake made and presented by the Hon. Secretary—Mrs. Hill-Owens—and most of the members and guests partook of it.

Everyone by now had "warmed up" and though the time for finishing was near, all were so happy that an extension of half an hour was given and even then it was a reluctant crowd that joined hands for "Auld Lang Syne."

The Golf Competition

The competition for the Simpson Trophy was played on the Pannel Golf Course, Harrogate, in showery but pleasant and stimulating weather. The course was in excellent condition. There were 14 competitors, among them being at least one ex-winner of the trophy, Dr. W. S. Gordon, and the competition was generally voted a considerable success. There were several scores close to each other, the ultimate winner being J. Plenderleith with a net score of 70 and the runner-up one stroke more.

THE ANNUAL BANQUET

Minister of Agriculture Proposes "The British Veterinary Association"

The Annual Banquet of the Association was held at the Hotel Majestic, Harrogate, on the evening of Wednesday, September 10th, 1952, with the President, Mr. Alan J. Wright, M.R.C.V.S., in the chair. On their arrival the members and their ladies, together with other guests, were received by the President and Mrs. Wright.

The high table company, and other guests, included the following :—Councillor A. V. Milton, J.P., and Mrs. Milton, Mayor and Mayoress of Harrogate; the Rt. Hon. Sir Thomas Dugdale, M.P., Minister of Agriculture and Fisheries, and Lady Dugdale; Sir James Turner, President of the National Farmers' Union, and Lady Turner; Sir Patrick Laird, Secretary, Department of Agriculture for Scotland; Professor J. G. Wright, F.R.C.V.S., President of the Royal College of Veterinary Surgeons, and Mrs. Wright; Mr. K. V. L. Kesteven, B.V.Sc., Chief, Animal Production Branch, Food and Agriculture Organisation of the United Nations; Colonel Stoddard-Scott, O.B.E., T.D., M.D., M.P. for Ripon, Yorks; Mr. de Nooy, representing the Dutch Veterinary Association; Mr. Peruval Pillai, appointed by the High Commissioner for Ceylon; Dr. Alexander, appointed by the Government of South Africa; Dr. H. G. Lamont, O.B.E., M.R.C.V.S., representing the Ministry of Agriculture for Northern Ireland; Mr. P. A. Rogan, M.R.C.V.S., D.V.S.M., representing the Ministry of Agriculture for Eire; Mr. W. C. Tame, Administrative Head of the Animal Health Division, Ministry of Agriculture and Fisheries; the Mayor and Mayoress of Doncaster; Mr. H. B. Allan, M.R.C.V.S., D.V.S.M., President of the Yorkshire Division, B.V.A., and Mrs. Allan; Mr. J. O. Powley, M.R.C.V.S., Chairman, Provisional Committee for the Congress, and Mrs. Powley; Dr. H. Bradley, representing the Ministry of Health; Mr. L. B. A. Grace, M.R.C.V.S., D.V.S.M., representing the Ministry of Food; Mr. C. L. Bembridge, President of the National Cattle Breeders' Association; Mr. W. G. R. Oates, Registrar, Royal College of Veterinary Surgeons; Mr. J. A. Lindsay, B.Sc., Agricultural Institute, Yorks; and Mr. K. G. Towers, B.V.Sc., M.R.C.V.S., Local Secretary of the Provisional Committee for the Congress.

"Borough of Harrogate"

The loyal toast having been duly pledged, Mr. J. O. Powley, M.R.C.V.S., in proposing a toast to the Borough of Harrogate, said that some of those present knew the beautiful town of Harrogate and the others, who were visiting it for the first time, saw in Harrogate a town the like of which they had never seen before. There were its layout, its beautiful gardens, its pine woods, its timbered streets, and last but not least its wonderful Stray.

The Stray, which was the making of Harrogate, had been endowed to the Borough by the Enclosure Act of 1770. In those days there had been some individuals—they must have been Yorkshiremen! —who looked into the future, and the Stray had been given in perpetuity to the commoners of Harrogate. The Stray could not be built on. One could gallop on it or play games of cricket or football, but could not build on it.

"The surroundings of this beautiful town," continued Mr. Powley, "present some of the most charming country in Great Britain, if I may be allowed to say that. Some Scotsmen will object, so I will modify it and say in England. We are just on the outskirts of the Yorkshire dales and

Yorkshiremen actually go even further than Scotland and think and believe that there is no country like it anywhere else in the world. The country around here is something which charms the eye.

"Harrogate is, as it were, right in the centre of Yorkshire and Yorkshire is a somewhat extensive county. It includes the North, East and West Ridings, and Harrogate is the gem set right in the middle.

"The present town is built around the Stray. In the old days it comprised the towns of High and Low Harrogate, which consisted mainly of hotels used by the visitors in the 1800s when they came to take the waters.

"We must look back on the people who ran the show—we call them town councillors now—and give them credit for their vision in laying out the streets and planting our wonderful trees, because once the town was situate in the open country on the fringe of the moors ; now it is a beautiful wooded town."

The present Council, said Mr. Powley, had brought the town right up to date by laying out its gardens, and the Yorkshire Society had been induced to put a permanent show-ground in the town which would attract the visitors of the future. There was no doubt that in the future Harrogate would be as progressive a town as it was now.

Councillor A. V. Milton, J.P., Mayor of Harrogate, in responding to the toast, said that he wished to thank the proposer very sincerely for what he had said about Harrogate. He himself found the task of talking about the town a difficult one because, by saying too much, he was accused of advertising whereas by saying too little he was considered a pretty poor Mayor.

"The thing that I really do want to say to you," he went on, "is that I am exceedingly happy to see all of you here to-night.

"Mr. Powley has referred to this very odd thing we have in Harrogate called the Stray, a 200-acre patch upon which nobody dare encroach in any way whatever. The only man who got away with doing so is one of Sir Thomas's predecessors—he ploughed it up! But now we have come back to a more normal state of affairs, and if you dare put a finger on it, woe betide you ; and so I think it should be.

"We who reside here live in a town which has its own particular characteristics and we want to keep them, and we do not want to ape anybody. But we who live here are always very happy to see others here. I gather from some of your friends that they have enjoyed their stay so far.

"We have a little bit of nonsense about our Crest and the black cockerel. There is a lot of controversy as to exactly what it means, but in our less serious moments it obviously means the cock of the north.

"Talking about our springs, I may say as a matter of interest that there are 84 of them and they are all different. I do not think I would advise you to try any of them, really! There was, of course, a time in the days when we had our two- and three-bottle men and our large banquets went on for many hours when it was perhaps necessary for people to come here and sample some of the 84 springs. I think, however, that those days have passed.

"In conclusion, may I again say that we are delighted to see you here. Sir Thomas, we bid you greetings to our town ; and I hope that I shall see you all again, probably to-morrow." (Applause.)

"The British Veterinary Association"

The Rt. Hon. Sir Thomas Dugdale, M.P., Minister of Agriculture and Fisheries, who then proposed a toast to the Association, said : "You will all realise that somebody in my position, not only as Minister but as one with a love of the countryside and rural life, is bound to come up against many veterinary surgeons from time to time and I have done so in many parts of the world. But I have never seen before so many veterinary surgeons and their ladies gathered together in one place. I therefore have a chance to say one or two words to you this evening and remember that, as Minister of Agriculture, I am very much an interested party in the welfare of your Association because—and I say this very seriously—I believe the welfare of the agricultural industry depends a very great deal upon the quality of the members of your Association. And there can be no doubt at all in my mind that if agriculture is to be fully productive, in the broadest sense of the word, it must depend to a very great extent upon the services of a strong, well-trained and progressive veterinary profession. (Applause.)

Graham Powell, 35, James Street, Harrogate.

Sir Thomas Dugdale, Minister of Agriculture, Proposes the Toast of the Association.

"Those words are words I selected with care because, although no doubt some of you may think I am a relic of the old Blimps, in point of fact you can be Blimpish and progressive at the same time. You can at the same time gather the fruits of wisdom of the past and adapt that wisdom to the progressive thought of the future. I believe that to be all-important, especially to members of your Association, who are so important in the national interest and particularly to the great industry of agriculture. Whereas some of our friends will call us Blimps, others will call us progressive, and if we can get the happy medium between the two then you and I together in our own and quite different ways may possibly in the time we have responsibility for helping the great industry of agriculture forward be able to make a useful contribution to that end.

"When I took over as Minister, the first thing I tried to do was to initiate a further production drive. As you know, as a result of that we hope to raise production to at least 60 per cent. above pre-war levels by 1956. Just to give an example, we have asked the industry to increase the number of calves that are being reared. We have asked them to try to increase the sheep population upon the lowlands and hills. All these subjects are matters of great argument and controversy as to how we should do it, but I am just stating facts. We expect to see a greater output of milk from the same number of cows. We are seeking further expansion of the pig and poultry populations ; we want as much meat as we can possibly produce from these islands.

"From one point of view our goal may appear to be a moderate one, yet we should like to see ourselves go far beyond the mark we set the industry and asked them to

achieve. If we could go further even than we have done to-day to cut down the losses of milk and meat caused by disease it would do much towards solving the problem.

"I would say that much has already been done by the veterinary profession in recent years. The average milk yield has been greatly increased by modern methods of treating mastitis and, indeed, by the widespread use of vaccine S.19, with which we are all familiar. The production of both meat and milk must have been increased by the rapid stride that has been made by the help of your profession in the eradication of tuberculosis. But, surely, what we have done in the past must only whet our appetite for more.

"As regards all these methods of treatment and the others now being used—are they being used right throughout the country as much as they might be? Let us face that problem together. Let us ask ourselves if we are doing all we can to tackle the other problems for which the full answer has not yet been found.

"Just as the farming community as a whole have accepted production targets for the next period of years, I do hope that the veterinary profession and your Association will accept it as their aim to see that all avoidable loss is cut down and that our flocks and herds are kept in a condition to produce at their full capacity. There is big importance in that.

"Now am I right in what I am going to say or am I wrong? I am encouraged to believe that in the years which have just gone by there has been somehow a subtle difference, a subtle change, in the relationship between farmers and veterinary surgeons, and I believe a change for the better. May I put it in this way: We all know that in theory at any rate prevention is better than cure. In relation to human medicine, many of us eat an apple a day to keep the doctor away, and in fact that sort of thing may keep the doctor off the doorstep. But is it not a better way to invite him in and ask him his advice and perhaps even follow his advice on how we should keep ourselves and our families healthy? I believe that this is becoming the practice more and more in the world of animal health as well as in that of human medicine.

"I believe that to-day farmers throughout the length and breadth of the land are more disposed to seek the advice of members of your Association on the health of their herds as a whole, with a view to preventing illness and disease, rather than wait until one particular animal in their herds is affected with some very serious ailment. This is a great step forward and although it perhaps calls for a different approach on behalf of the veterinary surgeon, as well as an extremely high standard of skill and training, I am sure that the profession will do all it can to encourage this attitude. (Hear, hear.)

"I believe more than ever as I go about the country that your services are really appreciated by the farming community."

The Minister went on to say that in looking through the agenda of the Congress he was very pleased to see that officers from various parts of the Ministry of Agriculture were taking such a prominent part in it. They were contributing to the discussions, not only on the research side but also in connection with field service. It was particularly pleasing to know, with personal experience to support the statement, that the relationship between the Association and the Ministry was so satisfactory at the present time. (Applause.) What could express that point of view more clearly than the fact that the Association had elected as its next President Mr. Graham, one of the Ministry's Superintending Veterinary Officers? Mr. Graham was to be congratulated on the honour that had been given him and the Association was to be congratulated upon its wise choice. (Applause.)

During the past year Mr. Graham had been very much engaged owing to the very severe outbreak of foot-and-mouth disease. "It was within only a few weeks of my becoming the political head of the Ministry of Agriculture," continued Sir Thomas, "that we experienced one of the most serious outbreaks of foot-and-mouth disease that has struck this country since the 1920s. You can put that to what use you will, but the fact remains that it happened; it happened on November 14th and I assumed office as Minister on November 3rd.

"We have had very serious times and very anxious times. Every morning when I went to the office the first thing I wanted to know was the exact state of the foot-and-mouth position, and the information was always there. We are not wholly clear or free of the disease and while it continues to rage on the other side of the Channel it must only be expected that further outbreaks may occur, but I think we can say with confidence that as far as this very severe outbreak is concerned the worst is over.

"This outbreak has shown us again—and I should like to emphasise this — the vital importance of suspicious symptoms being reported early. I gladly acknowledge here this evening the help that we in the Ministry have received from practising veterinary surgeons all over the country and also from the farmers themselves. The two together, the veterinary surgeons with the farmers, must in these problems and in these moments of emergency, constitute our first line of defence or, in other words, a kind of observer corps.

"During recent years, most fortunately, we have not normally had a very great deal of experience of foot-and-mouth disease in this country, and so I was particularly pleased to see that your members have had an opportunity of hearing Mr. Graham give a talk about the diagnosis of foot-and-mouth disease in the field. I say that because I think you will agree with me that we should all be far less anxious about this disease if we could be absolutely certain —and there are very few things that are certain in this world—that every case would be reported as soon as the very first symptoms appeared.

"The problem of foot-and-mouth disease surely returns to what I was saying a little earlier in my remarks to you: How much better it is to be safe than it is to be sorry afterwards and how important it is that we should have very early notification of any suspicion of this disease. I can say on behalf of the Ministry that if any suspicious symptoms are observed by any veterinary practitioner in any part of the country then the officers of the Department of the Ministry of Agriculture will at all times and at any time be only too willing to give any assistance that they possibly can.

"When we have an outbreak such as we have suffered during this last year, naturally the question arises in the public's mind as to whether our methods of dealing with the disease are adequate and up to date. We have learnt a lot, so I am informed, during these last three decades about viruses. I understand that from the professional point of view—and here there may be some of you who do not agree with me—the veterinary profession, in fact, knows more about viruses and the variations of them than a lot of the medical people who talk so much about them. I do not know. But whether that is right or wrong, it seemed to me quite definitely that the time had come when we might with advantage have an independent survey of our present methods of combating the disease, against the

background of the advances in scientific discoveries and in the light of our technical and administrative experience in this country and, indeed, our knowledge of methods being used in other countries.

"That is why, gentlemen, I have seen fit to appoint a departmental committee under the Chairmanship of Sir Ernest Gowers. His name will be well known to you all, and whatever the result of that enquiry may be I think we need be in no doubt that the report will be in the plainest of English and quite definite in its recommendations.

"I have asked the committee in their terms of reference to review the existing methods and to advise whether any changes should be made, and I know they will fulfil their task in the spirit in which they have been asked to do it. The Ministry will give all help in any direction that may be required. That committee, which I have tried to keep down to small numbers, I hope and think you will agree is a very high-powered committee.

"A prominent member of your profession, Professor Robertson, of the Edinburgh Veterinary School, is a member of the committee and I have no doubt at all that your Association will be asked to give evidence before the committee.

"Before leaving the subject of foot-and-mouth disease, I should like to take this opportunity to pay a tribute to the work of the Departmental veterinary staff during the months that have gone by —(Applause)— and also to the administrative staff as well. I am happy to see that you have seen fit to invite here this evening Mr. Tame, who has done so much in the administrative field to help in this very difficult time. They have been under very great pressure for many months and their devotion to duty over long periods of unremitting strain and their skill in dealing with outbreaks have been beyond praise; of that I have no doubt at all. The whole community does owe them a debt of gratitude, and what you do not know but what I can tell you this evening is that I have been amazed at the number of letters I have received from people completely unknown to me personally, who have written asking me to thank the veterinary services and those who have been working during this epidemic for the help they have given.

"I have dealt rather at length with foot-and-mouth disease because it has been so much in our minds in recent months. All I say now is that you will all have opportunities of expressing your views, either collectively or individually, before the committee that I have set up."

Whatever diseases were being fought, the Minister continued, all sides of the veterinary profession—the teachers, research workers, private practitioners and official veterinary officers—had their part to play as members of the team. It was in that connection that the B.V.A. had its own most important responsibility, because clearly the main contact with the individual farmer was the private practising veterinary surgeon, who could not give the best service unless he was kept constantly in touch with developments in the technical and administrative fields.

The Association was facing that task in a responsible and enlightened way. The Congress itself had that purpose principally in mind as one could see from its agenda. He was not thinking only of the formal meetings and the papers, but also of the informal talks that took place between individuals and which no doubt lasted into the early hours of the morning, because at the end of the day those informal talks very often did much more good than even the reading and hearing of the most scientific and learned papers.

It was a very great pleasure to him to have the honour of proposing a toast to the Association in his own native county of York, and in doing so he wished to include the name of their most distinguished President, Mr. Wright. (Applause.) Mr. Wright was, after all, what they all wanted to see—a genuine practitioner who had made good in his own area, which happened to be Cheshire, who had risen to the top of his profession and had the confidence of the Association. As long as the Association had within its membership people of the calibre and background and knowledge of Mr. Wright very little harm could come to them and probably a very great deal of good.

"I wish you well this evening," concluded the Minister. "I wish you well to the finish of your deliberations here at Harrogate. I wish you well in the years to come, and as Minister of Agriculture I would only add my thanks for your past services and ask you to remember that your members form a vital pivot to the whole future and well-being of our agricultural industry." (Loud applause.)

Mr. A. J. Wright, M.R.C.V.S., the President, B.V.A., in reply, said: "I am indeed honoured and happy to respond to this toast proposed in such an able and appreciative way by our Minister of Agriculture, Sir Thomas Dugdale, who is not only greatly respected as the Minister, but also as a fine practical farmer and great sportsman. (Hear, hear.)

"Many of you may not be aware of the close contact that Sir Thomas has had with the veterinary profession. Several years ago he was in great demand, when his figure was somewhat slimmer than it is to-day, by a certain section of the veterinary profession in India. There I believe he was, as it were, first jockey to the Royal Army Veterinary Corps! I understand that by his prowess as a jockey he was a great source of income to many members of this profession, some of whom may be in this audience to-night, and a great source of worry and loss to the bookmakers! (Laughter.)

"This toast is one to a profession and Association upon which rest great responsibilities and obligations. Not only must we possess full knowledge of health, but also we are called on to control, prevent and cure disease in a variety of species. We are an essential, necessary and integral part of a prosperous agriculture, but we have duties and responsibilities connected with human nutrition and well-being, as well as with livestock.

"The veterinary profession accepts its responsibilities, but they are not entirely ours alone. Governments, stock owners and allied professions must realise we are efficient and can well undertake these tasks if given the opportunities and facilities. We are very proud of our profession and this Association. No longer are we the Cinderella of the professions, and at last it is realised by all what a vital part we play, not only in maintaining a prosperous agriculture, but also in the whole economic set-up of the community and the country.

"We pride ourselves on the quality of our profession. It is perfectly true to state that the quality, efficiency and calibre of the British veterinary surgeon is the highest in the world and that in no other country is the standard of veterinary education and training so high as it is here. (Applause.)

"To-day, Sir, this profession without fear of contradiction is giving a better and finer service to the owners of both large and small animals than ever before, a service that is achieving much, that is showing good returns, but is often not fully appreciated by the recipients. It is a service that is well worthy of its hire and it demands a fair, adequate and professional reward commensurate with its quality and achievements. No service, whether professional or otherwise, can give of its best and continue to improve in efficiency and quality unless it is given adequate and just recompense.

"The potentialities and opportunities of our profession at present are enormous. Wide and new fields are opening up

before us. Old and fresh problems are always awaiting solution, and, given the facilities and encouragement, we are ready and able to tackle many of them.

"One field in which veterinarians have never been given the opportunity to play their full and proper part has been that of the control and inspection of foods of animal origin; particularly do I refer to meat inspection. (Hear, hear.) We are the only body of people fully trained and qualified to control this work with the highest degree of efficiency, both *ante-* and *post-mortem*. Meat inspection is surely applied veterinary pathology and who but veterinary surgeons are fully trained in this science? Britain, I am ashamed to say, is one of the few countries where the veterinary profession does not control this work which is of such public concern.

"Sir, we are ready and prepared to accept control of this important work, which we rightly maintain, because of our training and background, belongs within the sphere of our profession. (Applause.)

"In my humble opinion, another important field in which we have not been given as many facilities or opportunities as I think are necessary is that of applied veterinary research. I feel that so much vital and informative basic research work is being done which never sees the light of day and never has the opportunity of being applied in the field, and thus our stock and mankind are being deprived of the benefits.

"You, Sir, have paid tribute to the veterinary administrative staff. It is not usual at this function to praise our own members, but I think that, being a practitioner, I have a perfect right to do so and I know the whole profession joins me in congratulating the veterinary staff of the Animal Health Division on the able and efficient way they have tackled and almost achieved victory over the recent serious foot-and-mouth epidemic. (Applause.) At all hours, night and day, have the staff worked willingly and continuously without complaint. So often have their duties been of a very anxious and responsible nature. We do, Sir, offer them our congratulations for their efficiency and readiness in tackling this problem. The Government, the stock owners and the country as a whole owe them a debt of gratitude.

"I should like to assure you, Sir, and to state publicly that the profession and this Association solidly and entirely supports the slaughter policy as being the only proper, scientific and effective manner under existing circumstances in which to control and eradicate foot-and-mouth disease in this country to-day. (Applause.)

"It seems such a sad state of affairs that large sections of our Press are more ready and anxious to publish sensational and often non-factual articles and letters on this subject from pseudo experts, presumably for publicity purposes, than to publish factual and scientific matter from the real experts who have the knowledge and experience of the disease, thus causing doubts and fears in the minds of the public and often undermining confidence.

"We heartily welcome your action, Sir, in setting up this admirable committee to review the policy of dealing with foot-and-mouth disease in Britain to-day. But, in spite of what you said, Sir, we are somewhat disappointed that the membership does not include a greater number of veterinary surgeons, who are surely essential to assist the committee in assessing the value of evidence which must necessarily be mostly of a veterinary nature. We sincerely hope it is not too late to remedy this omission.

"Upon the shoulders of the Animal Health Division to-day rest tremendous responsibilities affecting the whole economy of the country. They are responsible not only for the formulation and implementation of the policy for the control and eradication of the notifiable diseases, but are vitally concerned in controlling and preventing many other scourges amongst our livestock, also with extensive research work and, by no means least, they are in close liaison with the practitioner in the field, both helping each other with problems common to both.

"I am proud to say the relationship between the whole-time staff and the practitioner has never been better or closer than it is to-day and is of the greatest mutual benefit to all concerned. I am confident that this mutual relationship will continue to become closer and closer.

"Mr. Minister, in view of the importance and quality of the veterinary staff of your Animal Health Division and the utmost need for men of the highest quality to be attracted to the service, it is no wonder that this Association and the profession has been so profoundly dissatisfied with the status accorded to this service by the Government.

"Certain small improvements have taken place during the last few years, but it is a deplorable state of affairs to realise that amongst the professional and scientific departments of the Government the veterinary staff is placed almost at the bottom. We maintain, and justly so, that our professional status in the Government departments should be next to that of the medical profession. I can assure you, Sir, that this Association will continue to fight to resolve this unsatisfactory and unjust situation and we do, Sir, ask you to help us.

"This profession has a tremendous but noble task and duty confronting it, of the highest national importance, and that is to save life and suffering amongst animals large and small and to reduce to an absolute minimum the loss of human foodstuffs due to disease and mismanagement. Every branch and section of the profession must collaborate and work not only together, but with other professions, bodies and ancillary trades whose spheres of work are closely allied with ours.

"In this connection, we are indeed happy and pleased that we have now a closer and more understanding relationship with the National Farmers' Union. (Applause.) The Diseases of Animals Committee of that body and this profession have surely one common goal in view, that is the reduction and eradication of disease to a minimum, and it is therefore only logical that both bodies should work and co-operate in the closest possible manner in a spirit of good will and understanding.

"Sir James Turner, I do appeal to you as President of that great national organisation to do everything in your power to create and foster a closer relationship between our two great bodies. And I know, Sir, only too well the force of your persuasive powers when used to the full. (Laughter.)

"In conclusion, I should like to say quite sincerely that I am confident that, given the encouragement, the opportunities and a fair and just reward, this grand profession of ours will play its part to the full and be a credit to itself and the world at large.

"You can rest assured, Sir, that we shall do our utmost to bring about the increase of production of foodstuffs of animal origin of which you spoke. We, the profession, agree with you entirely, Sir, that prevention is better than cure, and will do everything in our power by every means possible to get on to the farm to educate and prove to the stock owner that we are not there only to cure his individual animal, but also to advise and help him in controlling disease on a herd and flock basis.

"Sir Thomas Dugdale, I do thank you most heartily for the very kind and sincere way in which you have proposed this toast, and you, ladies and gentlemen, for the way in which you have received it." (Loud applause.)

"Our Guests"

Mr. A. M. Graham, M.R.C.V.S., President-Elect, B.V.A., in proposing a toast to the guests, said that the British Veterinary Association were very proud to have the privilege of entertaining the many distinguished people who were their guests that night. Whether the guests were from home or overseas, they extended a very hearty welcome to them. He hoped they were enjoying themselves and that they would have pleasant memories of the banquet.

They were very honoured to have with them Sir Thomas and Lady Dugdale. It was some years now since they had the pleasure of entertaining the Minister of Agriculture and they were delighted to have him with them now. Sir Thomas was the head of a very great Department which was by far the largest employer of veterinary manpower in this country, and the veterinary profession was closely associated with that Department in many of its more important schemes and projects. Sir Thomas had said that he was learning quite a lot about veterinary matters during his term of office and it was very gratifying to have heard him talk in such glowing terms of the veterinary profession and the work done by it. It was to be hoped that in the years to come both Sir Thomas and Lady Dugdale would again be their guests on many occasions.

They were very glad to have with them also Sir James and Lady Turner. Sir James was the very able and popular President of the National Farmers' Union and also a very old friend of the Association. Mr. Graham said he remembered hearing Sir James replying to a toast to Agriculture at one of their banquets some years previously and had thought at the time that the interests of farmers would never suffer as long as they had men of Sir James's calibre at their head.

The Association was very pleased to have present Professor and Mrs. Wright. Professor Wright was the President of the Royal College of Veterinary Surgeons, their governing body. They wished to congratulate him on his election to the presidency of that body for the second year in succession.

Also present were Sir Patrick Laird, of the Scottish Department, whom they hoped to see the following year at Aberdeen, and Mr. Tame from the Animal Health Division; various representatives of Government Departments, including Professor Lamont, from Northern Ireland; Mr. Rogan, from Eire; Mr. Heywood, representing Australia; Major Chadwick, from Iraq; Sir Frank Ware, representing Canada; Mr. Kesteven, representing FAO; representatives from Holland and Ceylon and various other countries, and representatives of the medical profession, the farming community and the breed societies. The list of guests was too long for each to be mentioned by name, but the Association was very proud to have all of them present.

Finally, in paying a warm tribute to the ladies, Mr. Graham said: "I am quite sure that in its long history Harrogate has seen many gatherings of this kind, but I am quite certain that it has never seen a more pleasing and charming bevy of ladies than that which has attended this Congress of the British Veterinary Association. We are very pleased indeed to see the ladies coming to our Congress. They do add gaiety and colour to it and we hope that in the future they will come in ever-increasing numbers." (Applause.)

Sir James Turner, President, National Farmers' Union, in response, said that he was deeply sensitive of both the honour and privilege of being invited to reply on behalf of the guests. The guests who had been privileged to attend thanked the Association for its wonderful hospitality. He was particularly glad that the proposer of the toast made

Graham Powell, 35, James Street, Harrogate.

Sir James Turner, President of the N.F.U., Responds for the Guests.

reference to the ladies, because it gave him an opportunity to thank the wives of the veterinary surgeons of this country for their sacrifice in always allowing their husbands to be at the beck and call of the wanton farmers! (Laughter.)

"Reference has been made to the necessity for complete co-operation between the farming industry, the stock owners and the veterinary profession," he said. "It has been my privilege to work over the last 10 years to achieve that end. We have had our ups and downs and there have been times when straight speaking has had a licence hitherto unknown. Nevertheless, we have progressively improved, and I thoroughly concur with the Minister's statement that the age is one in which we must see that preventive medicine rather than curative medicine is the need of our time. We cannot afford in this time of real national need to think only in terms of curative medicine.

"For this sense of co-operation there has got to be a much closer understanding between the veterinary surgeon visiting the farm and the farmer himself. I think the technique of approach of the veterinary surgeon has to be one which is a great deal better than it has been hitherto and it has to be, in my opinion, on the sort of basis that stimulates the interest of the farmer himself in wanting to know the mind of the veterinary surgeon, wanting to know how best he can use the veterinary surgeon's skill and knowledge in a preventive way. I am perfectly certain that that is capable of achievement, but I think you as a profession have got to think in terms of not baffling the farmer but rather of leading him on with you, and if you start talking high technicalities then I think you are not going to gain quickly the confidence of the farmer.

"So I would urge your profession to be extremely careful, when we are trying to engender this spirit of co-operation in the preventive field, that we understand one another's language. I think it is a prerequisite to the confidence that we need if we are going to achieve the objective we have in mind.

"You, Mr. President, said that the co-operation between my organisation and yours was progressively improving. I could not agree more. The goal is a common goal. Sometimes the means to the goal is a little different and if we cannot agree then we must agree to disagree, but at any rate it should be in the best of good will and good friendship.

" I have heard of such things as biological products and I have heard something about an official list. I have also heard about a gentlemen's agreement ; that shows our abundant confidence in one another in thinking that there are sufficient gentlemen to go round ! You will know—at least I hope your President has had the courage to tell you —that there is one particular commodity which is manufactured on a monopolistic basis by the Ministry of Agriculture, called crystal violet vaccine—and we understand we are maintaining a happy state of truce pending a tripartite meeting ! You can guess as well as I can what that means. (Laughter.)

" You, Mr. President, also said that we had to think in terms of our prosperity being a common one. It is perfectly true that unless we have the means you cannot have your reward, so it is no good talking about a reward for your services unless we are at one in a recognition that we are together in making sure there is within our industry *in toto* the means to pay all who have been worthy of their hire.

" Sometimes, when I think of or ponder on the words that are uttered in the 'other place,' I have my doubts as to the real appreciation of the worth and the value to the nation and people of this country of producing food. I have heard it said that there must be something wrong with agriculture, that land is making £100 an acre, and if a farmer can give that the Industry must be too prosperous and people must be paying too much for their food. And not one has stopped to think when covering a floor that it would cost £4,840 for an acre of linoleum, which has only a 10-year life ! (Laughter.)

" We might even go further and say that this great industry of milk production is producing a nutritional article of diet which is a great contribution to improving the lifeblood of our nation, namely, the youth of to-day—the men and women of the future. But, then, if we think in terms of milk at 7d. a pint it is a horrible thought by the side of ginger beer at 10d. a pint ! In other words, the whole appreciation of relative values of food, compared to other things, is cockeyed. (Hear, hear.)

" Therefore, I would say we have a lot to do together in this missionary field and the trouble is we do not stop often enough to find out what is really wrong with the nation. If we only did, and realised that the salvation of this nation was the maximum productivity of our own soil in order to release such foreign exchange as we can earn to buy the raw materials to keep the wheels of industry turning, we should have an awakening that would save us from the economic chaos that is threatening the nation to-day.

" Anyway, I would say to you as a profession, take heart. There have in the past been too many amateur veterinary surgeons. And ponder on the derivation of the word 'amateur.' After all, it comes from two French words—*aimer*, to love, and *tuer*, to kill ! (Loud laughter.)

" The agricultural industry is awaiting this fulfilment of the promise of co-operation from science and practice, and I have great confidence in our joint capacity really to achieve what is necessary in this country to-day and that is the maximum productivity of our land, to which the Minister has referred."

In conclusion, Sir James said that, turning to Harrogate, the one thing that struck him in relation to what had been said during the evening was how nice it would be if they could steal the statutes the Corporation of Harrogate held concerning the preservation of the Stray from building. Because, after all, posterity was going to judge this age and generation very harshly if in a decade or quarter of a century there were too many people trying to live off too little land.

He was happy to be able to say on behalf of all the guests how much they appreciated the opportunity of being with the Association and the fellowship which so obviously permeated the gathering. All the fortunate guests appreciated such hospitality and, on their behalf, he wished to say a warm Thank You. (Applause.)

The Congress Excursion

It is quite conceivable that comfort and moderation contribute as much as do its 84 medicinal springs to the curative value of a stay in Harrogate. At all events, these factors held the key to the unquestionable success of the modest excursion to Bolton Abbey on the Thursday afternoon—a very happy trip by two coach loads of supremely friendly people, some secretly grateful for the knowledge thay they would not be returning, worn out after the customary full day's run, to face the exertions of a third all but consecutive evening in the ball room. Truth to tell, the weather was in a rain-veiling mood, but after all, the moors and valleys must be taken as they are found and much beauty was seen and revelled in during the afternoon.

There is every variety of scenery in Yorkshire, ranging from the moors of the Pennines to the sands and cliffs of the east coast, and from the outcrops of the mountain limestone to the boulder clay and reclaimed land of Holderness.

On this occasion the party of 64 members and friends travelled by Blubberhouses Moor to Bolton Abbey. The sun did not emphasise the purple of the heather and the clouds were flying low as the group descended the side of Kex Gill to the valley of the Wharfe where Bolton Abbey stands on the bank of the river. The water is wide and quiet here though retaining a little of the speed of its mountainous origin and stepping stones can be used to cross. A short distance upstream the river foams through the Strid—a narrow rocky channel less than 5 feet wide with undercut sides and enclosing a seething torrent. It was here that the " Boy of Egremond," the heir of Romillé, was dragged to death with his hound in leash when he tried to bound across and the dog pulled back. His untimely fate was commemorated by the erection of the Augustinian Priory. After 400 years, the house passed to the crown in 1542 and soon afterwards to the family of Clifford and eventually, by marriage, to the Duke of Devonshire, in whose possession the estate continues.

At Bolton Abbey
(Mrs. Hill-Owens, Mr. and Mrs. Alec. McLean).

The Congress Excursion: After Tea Grouping at Craiglands Hydro, Ilkley.

The excursion returned to Ilkley with Rombalds Moor—the moor of Yorkshire's well-known folk-song—sweeping up behind the town. Tea was provided at the Craiglands Hydro and the return to Harrogate was via Otley—a busy market town where printing machinery of world-wide renown is produced.

* * * * *

The Ladies' Guild Excursion

On the Tuesday afternoon the ladies went to Fountains Abbey, a point of interest on the way there being the old stocks at Ripley. Very soon there was a good view of the abbey. It is indeed a wonderful example of a Cistercian monastery and the claim that it is one of the finest in the country was not disputed by anyone in the party. The setting is quite delightful and the ruins still have a real atmosphere of peace. An excellent model that can be seen before actually exploring makes it easy to reconstruct much of the beautiful building in the mind's eye. A stay of one and a half hours will give an idea how much there was of interest and it was with regret that the move to Ripon was made. Tea awaited us there and it was very unlike the usual excursion tea. Small tables were most attractively set on a large loggia overlooking a lovely garden, and the attendance and food were up to the same standard. Time permitted only a very brief and rather tantalising view of Ripon Cathedral and the return to Harrogate in time for the evening's festivities was made with memories of a most enjoyable afternoon. D. G.

ARTIFICIAL INSEMINATION OF CATTLE

Dr. John Hammond, Reader in Agricultural Physiology at Cambridge University, speaking at the annual meeting of the Society of Dairy Technology, said that one drawback to artificial insemination from the point of view of the pedigree breeder had been that the breeder was not always able to obtain an insemination from a nominated bull. In future this would be possible, because it had been discovered that bull semen could be frozen and kept fertile for at least seven months. This meant that they could now get cows in calf from a bull which was no longer alive.

By artificial insemination a small farmer could now get his cows inseminated with a good bull for less than it would cost him to have them served by a scrub bull. From good bulls more than 3,000 cows had been inseminated in a year.

* * * * *

COLONIAL RESEARCH: CONCERN OVER DEVELOPMENT UNCERTAINTIES

Long-term planning and the recruitment of research workers in colonial territories are being seriously affected because of uncertainty over further colonial development and welfare funds after the present Acts expire in March, 1956. These fears are expressed in the report of the Colonial Research Council recently issued, together with the reports of nine other research councils, committees and centres, as *Colonial Research*, 1951-52 (Stationery Office, Cmd. No. 8665, price 6s. 6d.). In spite of a substantial reduction in colonial research this limitation of funds imposed in 1950, some 36 new schemes and 53 supplementary schemes were approved, involving grants totalling £868,857.

They include pilot schemes for the reclamation of tsetse infested areas in Kenya, Uganda, and Tanganyika; experiments in East Africa with the spreading of insecticides from aircraft; the establishment of a veterinary research laboratory and other facilities in Malaya, amounting to £95,000; research into the maize rust disease in West Africa and the establishment of a pool of plant pathologists at the Commonwealth Mycological Institute, primarily to assist the smaller colonial territories.

THE COMMERCIAL EXHIBITION

This year the exhibitors were confronted with a race for time, owing to the unfortunate encroachment of a prior show upon their period of preparation, and the fact that a grand display was ready, both as a whole and individually, for the official opening on the Monday morning reflected the greatest credit upon the representatives of the firms concerned. Though the narrowness of the annexe to the sessional place of meeting gave the hall a cramped appearance, this fortunately proved somewhat deceptive and space was found for some very effective staging of drugs, instruments and appliances, books, etc. The site, moreover, was readily accessible to members, and throughout the week the Exhibition was a centre of lively business interest and social intercourse. The President's words of appreciation in commending the display to the assembly will be found in our account of the opening meeting of Congress, in which reference also is made to the greatly appreciated action of the exhibitors in presenting gifts to the President and Mrs. Wright.

Graham Powell, 35, James Street, Harrogate.

POST-OPENING TOUR OF THE EXHIBITION.

The Stands

ARNOLD & SONS, 54, Wigmore Street, London, W.1. Once again the stand of Arnold & Sons veterinary instruments attracted admiring attention, a complete range of most surgical and veterinary instruments being on view. Special interest was shown in the modified electric line and pin firing and debudding outfit, the Wood anaesthetic outfit, the mobile shadowless lamp, and the Wood-Knight positive pressure interrupter.

Amongst the smaller instruments it was interesting to note that practically the entire range is now available in stainless steel. This includes such appliances as castrating clams, oesophageal forceps, McLean's teat knives, Hall's teat knives, etc.

The tubegauze applicators and bandages were also on show, together with a wide range of diagnostic instruments for both small and large animals.

Veterinary surgeons are reminded that Arnold & Sons now have branches at 130, George Street, Edinburgh, 44, Kildare Street, Dublin, and 1, Market Street, York, where a complete range of all requirements is held.

. . . . . .

BAILLIERE, TINDALL & COX, LTD., Publishers and Booksellers, of 7 and 8, Henrietta Street, London, W.C.2, displayed a full range of British and American veterinary books. These included the recent second edition of the "Textbook of Meat Inspection" by H. Thornton, which has been extensively revised and brought up to date, and a recent new book for students of public health, agriculture and meat technology entitled "The Inspection of Food" by the same author.

Among American books which claimed attention were the new and revised second edition of "The Infectious Diseases of Domestic Animals" by W. A. Hagan and D. W. Bruner, and an entirely new book by I. E. Newsom, "Sheep Diseases," which is claimed to be the most exhaustive and up-to-date manual obtainable.

Standard works on show included Dollar's "Veterinary Surgery," Kirk's "Index of Treatment in Small Animal Practice," and the new edition of Linton's "Veterinary Hygiene," while considerable interest was aroused by the advance announcement of a new work, "Manual of Infertility and Artificial Insemination in Cattle" by P. G. Millar and N. P. Ras, and of a completely revised eighth edition of Banham's "Veterinary Surgeon's Vade Mecum," formerly known as Banham's "Veterinary Posology and Other Information." Both these books will be available before the end of the year.

. . . . . .

BAYER PRODUCTS, LTD., Africa House, Kingsway, W.C.2. The Bayer stand this year gave a prominent place to biologicals for use in all domestic animals, and it was stressed that these products were available only to veterinary surgeons. The comprehensive list included sera and vaccines for lamb dysentery, pulpy kidney, braxy, blackleg, black disease and scours.

Apart from the recognised usefulness of "Aggrecolin" in scours in calves, foals, piglets and lambs, it was also stressed that this serum can be extremely useful in metritis and mastitis in sows (*viz., The Veterinary Record* of March 29th, 1952).

Preparations for combating swine fever were also shown, which included swine fever serum and also the homologous serum "Suiseptiferin" containing the antigenic properties of the two most common secondary invaders.

The two chemical preparations which were most prominently displayed were "Roccal" and "Tycine."

"Roccal" excited much interest amongst those visiting the stand, due to its rapid effective action and economy in price. This antiseptic can be used for rapid cleansing of the skin, obstetrics, cleaning of wounds and cleaning of surgical equipment. Another point which aroused considerable interest is its deodorant action, particularly in the presence of urine.

"Tycine"—this product is already extremely popular with the veterinary profession for its effectiveness in the most stubborn cases of external otitis, owing to its rapid bactericidal action and its ability to alleviate irritation and promote healing of the damaged tissues.

Several well-known Bayer products were shown, such as "Amphotropin" for hard pad and post-distemper nervous conditions; "Murnil" vitamin H, an excellent adjunct for all skin conditions; "Novalgin," an efficient antirheumatic in all animals and a safe and effective method of treating colic in horses; "Nemural," one of the best taeniacides in small animals, and "Istin," an effective purgative in horses and pigs.

Many other products were also brought to the notice of the veterinary profession, including "Pentobrocanal," an intravenous anaesthetic which has been recently introduced by Bayer's for operative work and euthanasia in small animals.

. . . . . .

BOOTS PURE DRUG CO., LTD., Station Street, Nottingham. The exhibit emphasised the theme of "Boots Service to the Profession," stressing several advantages, such as "one transaction" showing the advantages of purchasing almost all proprietary requirements from one organisation. Illustrations of a "collection of empties" service, the Britain-wide location of branches, and the general ability to serve the profession were illustrated.

Attention was also drawn to the dispensing packs of penicillin intramammary suspension, the new ear drops containing tyrothricin, benzocaine and gamma BHC, and a sulphanilamide pack.

Details of an "own name label" service to members of the profession were also given.

A display of products restricted to the profession was also on view, including special hormone products such as serum and chorionic gonadotrophin, and posterior pituitary extract. A pack of procaine and adrenalin injection 2 per cent. and 5 per cent., and

various other preparations in daily use in the profession were shown, together with the Boot's series of special leaflets for the profession.

. . . . . .

Brookwick, Ward & Holfeld, 149, Sutton Court, W.4 (Hauptner), showed a selection of instruments from the Solingen factory. Of particular interest was the large range of castrators and emasculators and the complete set of hoof knives and hoof operating instruments. Artificial insemination instruments attracted attention, as did the Hauptner TT outfit. An outstanding innovation was the Hauptner TT calliper, with dial reading and trigger action, with readings of one-tenth of a millimetre. A useful infusion apparatus, adaptable to any size bottle and to any syringe and usable under field conditions, was introduced for the first time.

The Hauptner bull ringer, as advertised in *The Veterinary Record*, was shown, as well as the lesser-known "Flessa" bull ring introducer for the "Flessa" double locking steel bull ring. The Hauptner tattooing forcep and various types of ear markers and closers were on the stand. In this category, the single action, one handed, lightweight Supercrotal punch and closer was the subject of favourable comment.

. . . . . .

Burroughs Wellcome & Co. (The Wellcome Foundation, Ltd.), 183-193, Euston Road, London, N.W.1. The theme of this stand was "Advances in Therapeutics," illustrated by a number of new and interesting "B.W. & Co." products.

"Wellcome" brand Distemper Therapeutic Serum (Mixed) is a refined and concentrated serum for the treatment of distemper and the common secondary infections.

"Wellcome" Feline Infectious Enteritis Vaccine, a killed tissue virus suspension prepared from the spleens of kittens artificially infected with the virus of feline panleukopenia. Two injections of 1 c.c. of this vaccine give a good level of protection against the disease.

"Wellcome" Swine Erysipelas Vaccine (A.T.), a new vaccine for prophylaxis against swine erysipelas, without simultaneous administration of serum. It is prepared from virulent strains of *E. rhusiopathiae* grown in special media to ensure maximum growth and production of the requisite antigen. The cultures are killed with a solution of formaldehyde and the antigen adsorbed on aluminium hydroxide.

"Wellcome" Sulphathiazole Intramammary Injection, a 50 per cent. suspension of sulphathiazole in an oily medium presented in single dose tubes of 20 grammes. Indicated for the treatment of staphylococcal mastitis.

Displayed with this new intramammary product were the other members of the range of "B.W. & Co." penicillin intramammary injections in the original "Wellcome" tube.

"Nicamide" Injection of Nikethamide, the safe and dependable stimulant of the central nervous system. Indicated for the treatment of conditions associated with shock and depression of the respiratory and circulatory functions.

A feature of the literature exhibited on the stand was the attractive folder specially designed for the Harrogate Congress and, as in previous years, distributed to all veterinary surgeons before the opening date.

. . . . . .

Chappie, Ltd., Trading Estate, Slough, Bucks. The stand of Messrs. Chappie, Ltd., was well designed. On it were shown the four products manufactured by the firm: Chappie the dry food and Lassie the canned food for dogs, together with Whiskas the dry food and Kit-e-kat the canned food for cats. Veterinary surgeons visiting the stand were invited to leave their names and addresses so that samples of the various foods could be sent to them. Incidentally, this sample offer is open to all veterinary surgeons whether or not they attended the show. The display demonstrated the considerable strides this firm have made in the manufacture of animal foods with a high nutritional value.

. . . . . .

Cooper, McDougall & Robertson, Ltd., Berkhamsted, Herts. This stand was devoted entirely to new additions made this year to the well-known Cooper range of parasitic dressings and other veterinary preparations.

These additions were Cooper's demodectic mange dressings (ointment and concentrate), anthelmintic capsules for dogs, analgesic eye dressing, and uterine pessaries.

The demodectic mange dressings were of particular interest and are the outcome of extensive field trials carried out during the post-war period. Reports from practising veterinary surgeons who co-operated in these trials confirm that a very high degree of success is obtained in the treatment of both squamous and "pustular follicular mange" by the use of one, or both, of these dressings, although it is not claimed that a complete cure is effected in all cases of the disease.

. . . . . .

Crookes Laboratories, Ltd., Park Royal, N.W.10. Prominently featured on this stand were two pig products, *Ferrovet* and *Vitamins A & D Injection*, both of which not only are of veterinary importance but, it is claimed, enable the farmer to achieve his aim of breeding bigger pigs.

Ferrovet is used both prophylactically and therapeutically in piglet anaemia, and is both economical and effective in its results. A single injection given in the first few days of life, followed by a further injection in the third week, should provide adequate protection from that age until slaughter-weight has been reached. The iron is completely absorbed and very slowly eliminated. Both appetite and weight are gained when it is given to pigs.

Vitamins A & D Injection makes it possible to give, in a single injection, sufficient A and D vitamins to provide an accurately calculated requirement for every pig, at all stages of its life, avoiding the wasteful and uncertain method of adding vitamins to the diet.

Four more Crookes veterinary products completed the exhibition, providing a conspectus of this firm's interests in the veterinary field.

Obstetric Cream (Veterinary) is a resistant protective cream designed specifically for routine veterinary use.

Collotone Veterinary is a general tonic which has been widely employed in the post-operative period and during convalescence, for young or small animals.

Calamine Lotion (Veterinary) is suitable for all non-parasitic skin conditions of cats and dogs.

Vitamin D_3 (Veterinary) is now supplied in two potencies, containing in each c.c. 5,000 and 100,000 I.U. of vitamin D_3 respectively.

. . . . . .

Evans Medical Supplies, Ltd., Speke, Liverpool, 19. A feature of the stand was a display of antibacterial Sensitivity Test Tablets. These tablets, which consist of test quantities of penicillin, streptomycin and chloramphenicol, are used for determining the sensitivity of organisms to the various antibiotics. A demonstration of the effects of the tablets on various organisms was given on the stands. These tablets, under the name Sentests, have now been marketed.

Another new product was blackleg and lamb dysentery vaccine which enables protection against both blackleg and lamb dysentery to be given with one injection.

Other products which were displayed included caponets for chemical caponisation, pirevan for redwater, penicillin preparations for veterinary use and rondase (hyaluronidase).

. . . . . .

Genatosan, Ltd., of Loughborough, exhibited their range of vaccines and sera, which has recently been reviewed and brought up to date in the light of current therapeutic developments.

"Alvor" contagious pneumonia vaccine and "Tregor" joint-ill vaccine, which have enjoyed the confidence of the veterinary profession for many years, have been retained, but their effectiveness has been increased further by the inclusion of additional antigens and they now give protection against all the bacteria usually associated with these conditions.

In addition, the range now includes blackleg vaccine (both as a formalinised whole culture and as a sterile filtrate in the form of aggressin), braxy vaccine, mixed braxy and blackleg vaccine, lamb dysentery serum and vaccine, pulpy kidney serum and vaccine, tetanus antitoxin, and tetanus toxoid. "Mega" pessaries, consisting of a polyvalent vaccine incorporated into a glyco-

gelatin base containing methyl violet and intended for the treatment of vaginal infections, were also on display.

Altogether a useful range of reliable biological preparations, in new and attractive packs, has been made available to the veterinary profession at reasonable prices.

W. Gimber & Sons, Ltd., 2, Queen's Road, Peckham, S.E.15. On this stand W. Gimber & Sons, Ltd., displayed their now customary wide range of instruments and sundries. Amongst several items causing particular interest were the Hauptner bull ringer and holder combined, and the Vidor fluorescent hand lamp.

"Tubegauz," the new non-adhesive method of bandaging, was tried out by almost every visitor to the exhibition and from the interest shown should prove to be of use to all branches of the profession.

The directors would like to take this opportunity of thanking all its clients for the continued interest taken in the company's products and service.

Glaxo Laboratories, Ltd., Greenford, Middlesex. Dominant theme of the Glaxo stand was "Questions and Answers." The questions—concerned principally with the use of antibiotics and vitamins in veterinary practice—were posed on an illuminated panel; the answers were given in a special Congress number of the bi-monthly Glaxo publication *Veterinary Forum*, issued to visitors to the stand.

The company's deep association with antibiotics was further reflected in a display of Glaxo penicillin and streptomycin products. Among these, the newcomer Streptopen (a combined penicillin and dihydrostreptomycin cerate) received special emphasis.

The section of the Glaxo stand devoted to Cytamen stressed the growing importance of vitamin B_{12} in veterinary practice. Featured also was the full range of Glaxo veterinary products in their now familiar pink and black packing.

James L. Hatrick & Co. (London), Ltd., 58, Britton Street, Clerkenwell Road, London, E.C.1. This firm has been manufacturing surgical and veterinary instruments for nearly three centuries, and specialises in the production of sutures, catgut (chromic), etc. This year was their second appearance at the veterinary Congress.

A special feature was made of the new "T.T. case" made of anodysed aluminium, containing clips to take three T.T. syringes, either Dental Manufacturing or McLintoch's, with spaces for vials of avian and bovine injection ampoules, also for torch and scissors.

Also displayed was an assortment of surgical bags, particularly the Canonbury bag, which contains four drawers, to hold all instruments for small-animal surgery, as well as veterinary instruments of their own manufacture and used in general practice.

The preparation of the catgut in their aseptic laboratories is medically supervised and all batch samples are tested under expert pathological supervision for sterility as laid down by the Therapeutic Substances Act. In every respect their prepared catgut meets all the requirements as laid down by the British Pharmaceutical Codex.

The company also make a feature of replacing broken hypodermic syringes with new ones, and they have stocks of hypodermic needles of all sizes.

C. J. Hewlett & Son, Ltd., 35-42, Charlotte Road, London, E.C.2, and Glasgow, displayed a selection of their speciality products, prominence being given to their series of calcium borogluconate injections for the treatment of metabolic disorders in dairy cattle. "Duo-Phos," a recent addition to this range, containing dextrose 20 per cent. with double phosphorus, was exhibited for the first time.

"Probactol," a new preparation for the treatment of bacterial infections of the intestinal tract, received considerable attention. It contains two orally active bacteriostatic agents, phthalylsulphacetamide and sulphadimidine, together with adsorbents, and is available as a suspension or as tablets. Penicillin sulphadimidine (Hewlett's) intramammary injection and a complete range of their "Anaesco" preparations were among the exhibits.

As sole agents for Messrs. Organon Laboratories, Ltd., they exhibited fused sterile implants of progestin, testosterone and oestradiol, also ampoules of gestyl, pregnyl and other well-known hormone preparations.

Instruments displayed included those used for the McLintock technique in rumenotomy and the McLintock preset syringe for tuberculin testing. Considerable interest was shown in the new Hewlett T.T. case for McLintock syringes and the special record needle, needle nozzle and keeper for these syringes.

Imperial Chemical (Pharmaceuticals), Ltd., Fulshaw Hall, Wilmslow, Manchester, showed a comprehensive range of products already well known to the veterinary profession. A recent introduction on view was "Kemithal" sodium, now recognised as a safe and reliable anaesthetic for small animals. Clinical trials have shown that it possesses definite advantage over other intravenous barbiturates. The value of "Anavenol" K as an intravenous anaesthetic for large animals, especially cattle, was also stressed.

Other products shown included "Sulphamezathine," now (it is claimed) the most popular sulphonamide in veterinary practice. An extremely valuable aspect of "Sulphamezathine" is its ability to establish rapidly, high and persistent therapeutic levels in all species. In addition, the various formulations of "Cetavlon" were also on view. This valuable bactericidal cleansing agent is ideal for use in both the surgery and the field. "Cetavlon" concentrate M.C. and "Cetavlon" udder cream are especially suitable for use in the prevention of bovine mastitis.

"Lorexane," pure gamma benzene hexachloride, and "Tetmosol," also received their due recognition as reliable remedies in the treatment of mange. "Lorexane" ear lotion is a new formulation specially designed for otodectic mange in dogs and cats.

International Serum Co., Ltd., The Paddocks, Frith Lane, Mill Hill, N.W.7. The complete range of sera and vaccines exhibited by the International Serum Co., Ltd., included swine erysipelas serum and vaccine, pulpy kidney serum, lamb dysentery serum, tetanus antitoxin, white scour serum, blackleg serum, staphylococcus and *C. pyogenes* toxoids and abortus vaccine S.19.

Among other products were anti-anthrax serum, swine fever serum, crystal violet vaccine, leptospira serum and Padisan canine distemper and hard pad serum, all products of the Behring Works, Marburg/Lahn.

In addition, there were on show some of the veterinary specialities of the Farbenfabriken Bayer, Leverkusen, which have been recently introduced. These were "Supronal," an improved sulphonamide, effective against both aerobic and non-aerobic organisms, which is supplied in the form of an emulsion for local application. Other products included Cispidon Brand of dioxyanthraquinone, a reliable and safe purgative for all animals, and Artena, an arsenical tonic and restorative, which is supplied in two strengths, 1 per cent. for small animals and 5 per cent. for large animals.

May & Baker, Ltd., Dagenham, Essex. The M. & B. stand laid emphasis on the firm's research policy and technical information service to the veterinary profession. It is well known that May & Baker's research in human medicine has been closely linked with veterinary research.

In 1945 a separate veterinary research station was established at Boarded Barns Farm, Ongar, Essex. The results of field trials here as well as the published and unpublished reports of independent workers have always been made freely available to professional enquirers.

Recently introduced products featured on the M. & B. stand included "Dibrogan" cream for the treatment of allergic and pruritic skin disorders, burns and abrasions, and infected wounds.

"Protegan" suspension with penicillin is a new combination of agents which has been shown to have a wide range of antibacterial activity. This product is intended for intramammary injection in the treatment of bovine mastitis. "Entramin," already well established for the treatment of blackhead in turkeys, was featured in a new capsule presentation for the treatment of individual and small numbers of turkeys.

Newton Victor, Ltd., 15, Cavendish Place, London, W.1. A convenient sub-division was made of this company's exhibits—into diagnostic X-ray apparatus on the one hand and electromedical apparatus on the other. In the former was displayed the Newton Victor model K-5 portable veterinary X-ray unit, a lightweight but powerful apparatus designed for a wide range of service in both large- and small-animal practice. It was shown in two alternative forms—as a strictly portable unit, packing into a convenient carrying case and ready for operation in any locality where suitable electric supply is available, and as a mobile installation incorporating a floor-mounting tubestand, designed for use in the surgery or clinic. The electromedical exhibit included the well-known Newton Victor inductotherm portable short-wave diathermy apparatus for the veterinary application of deep therapeutic heat, and also the company's new design of portable, direct-writing electrocardiograph which was on exhibition for the first time.

Reckitt & Colman, Ltd., Pharmaceutical Department, Hull, featured the following preparations :—

Dettol Antiseptic—non-poisonous, non-staining, for treating injuries in animals and for the protection of the veterinary surgeon. Dettol is a highly efficient germicide.

Dettol Obstetric Cream—for use in calving, foaling, lambing, etc. Highly germicidal and deodorant.

Instrument Dettol—specially formulated for instrument disinfection. Forms a clear solution in soft or distilled water.

Ward, Blenkinsop & Co., Ltd., 6, Henrietta Place, W.1. In their range of veterinary products Ward, Blenkinsop & Co., Ltd., featured their preparations of Penotrane. This highly penetrating bactericide and fungicide is available in the following forms :—

Cream—for acne, blepharitis and sore or cracked teats.

Dusting Powder—for ear canker, weeping eczema and vaginal insufflation following difficult parturition.

Intra-mammary Cream—for treatment of mastitis.

Jelly—an excellent lubricant for protection of the hands and arms and for treating ringworm around the eyes of cattle.

Pessaries—for prevention and treatment of *post-partum* infection and trichomoniasis.

Solution—for inter-uterine injection in acute purulent bovine metritis.

Tincture—for pre-operative skin sterilisation and as a paint for ringworm.

Other products displayed included :—

Sterathal Suspension—for gastro-enteric infections; calf scour.

Steravite Eye Ointment and *Steramide-Ag. Eye Drops*—for ocular infections and injuries.

Viacutan Cream and Lotion—for follicular mange, interdigital cysts and other dermatoses.

Watson & Sons (Electro-Medical), Ltd., East Lane, North Wembley. The Watson portable X-ray apparatus Type MX-2 shown on this stand offers all the facilities required for X-ray work in the normal veterinary practice. The compact, shockproof X-ray unit has a rating of 80 kVp at 15 mA., which is adequate for most requirements, yet it is simple in use and readily transported in a small car.

Radiographs demonstrating the immense value of X-rays in confirming diagnosis and demonstrating the need for surgical measures were shown to advantage on cold cathode illuminators. A range of accessories included the "Lucidex" secondary radiation grid, the use of which gives greatly improved results in the radiography of the thicker parts of animals.

Willington Medicals, Ltd., 87, Whitchurch Road, Shrewsbury, are specialists in veterinary supply, and particularly in packing to the requirements of veterinary surgeons with names and addresses on the labels if required. They supply the profession only.

They showed a comprehensive range of goods of their own manufacture for general use; in addition they supply most of the specialities of other manufacturers, also instruments. They offer a complete range of sera and vaccines and stock all I.C.I. veterinary preparations.

Five products featured were :—

Chelix (*Elixir Chelidon*) in liquid and tablet form. Surprising results are claimed for success in the treatment of kidney and bladder disorders in large and small animals.

Stomach Powder.—A standard product in wide use.

Acramide Antiseptic Wound Dressing.—A combination of acriflavine and sulphanilamide in a non-greasy paste. It is regarded as an excellent dressing.

Willsalve.—A most useful antiseptic zinc cream for general use.

In addition, Willington Medicals, Ltd., carry out a large business in dispensing to practitioner's own formulae, packed and labelled as required.

Willows Francis Pharmaceutical Products, Ltd., 73, 75 and 89a, Shacklewell Lane, London, E.8. "Willows" attempted to prove once again that they are ever mindful of the needs of the profession and, as always, do their best to give service in every particular.

"Xylotox" was prominently featured on Stand 20 and won approval from the profession, due to its being a new and most effective preparation capable of giving really first-class local and topical anaesthesia.

"Nupental" and "Rumoxane" also made their début and were very well received.

Willows range of drugs, pills and tablets, injections, sera and vaccines, supported by instruments, provided interest and speculation.

The firm states that it looks forward with pleasure to 1953 and Aberdeen.

[*Housed in the Annexe was also a Swine Fever Exhibit by the Ministry of Agriculture and Fisheries. A description of this most informative feature appears on page 697.*]

VICTORIA VETERINARY BENEVOLENT FUND—LADIES' GUILD

21st ANNUAL GENERAL MEETING

The 21st—and therefore the "coming-of-age"—annual general meeting of the Ladies' Guild was held in the Council Chamber, Municipal Buildings, Harrogate, on September 9th, 1952.

The President, Mrs. M. E. Wright, welcomed the following ladies : Mesdames N. Allan, M. A. Allan, Bovett, Bruford, Forgrave, Graham, Glover, Hebeler, Hill-Owens, Holroyd, E. McFadden-Jones, Ingram, Jennings, J. H. C. Kennedy, K. G. R. Kelly, M. A. Miller, H. Mitchell, E. McLean, McKinna, D. Nurgan, J. M. Murphy, M. Pottie, A. J. Roberts, M. G. Smith, M. Tweed, J. M. Thomson, M. Weipers, E. B. Wooldridge and E. M. Wooldridge.

The Hon. Secretary (Mrs. Hill-Owens) gave a résumé of the year's work. She spoke of the three severe losses sustained at headquarters by the Guild in the deaths of its founder, Lieut.-Colonel Simpson, Mr. H. W. Steele-Bodger—a Council member of the V.V.B.F. and whose wife was a Past-President of the Ladies' Guild—and Mrs. J. J. O'Connor, of Eire ; also in the passing of one Divisional member of the North Wales Division, Mrs. Llewellyn Jones, of Ruthin. The sympathy of the Guild was extended to the homes of every one of these and replies had been received.

A Greetings Telegram was sent to Professor and Mrs. Mitchell, Edinburgh, on the occasion of the marriage of their daughter, wishing the young couple God-speed.

"There are still places in England which have not yet responded to our appeal or supported us in any way," continued the Hon. Secretary. "Mrs. Glover, the Hon. Treasurer, is waiting to increase her roll. Out of 5,000

veterinary surgeons in this country maybe 3,000 are married. Of these, we can only account for approximately 1,000."

The Yorkshire Ladies were thanked for most enthusiastic and heartfelt help which they had given ; also for seeing to the comfort and welfare which had been provided that morning for the meeting. A vote of thanks was passed to Mrs. Allan.

The Ladies' Guild acknowledged the help from the B.V.A. headquarters, 36, Gordon Square, and V.V.B.F. at 10, Red Lion Square.

The President, Mrs. Wright, was thanked for her year of office and Mrs. Glover for faithful attention and devotion to the Fund for many years.

Election of Officers for 1952–53

The following ladies were then elected to the various offices for 1952–53 :—

President.—Mrs. C. L. Graham.

Hon. Secretary.—Mrs. Hill-Owens.

Hon. Treasurer.—Mrs. R. E. Glover.

Committee.—Mesdames Bruford, Barrett, King, Matthews, Ritchie and Wright.

Hon. Auditor.—Professor J. G. Wright.

Hon. Treasurer's Report

Although the excellent total of £1,000 was not reached again, the balance at the bank of £700 was very gratifying in these difficult times.

The following items were among amounts received :—

	£	s.	d.
Irish Branch	95	0	0
North Ireland	10	11	0
North Wales	26	19	0
South Wales	65	0	0
Lancs, Cheshire (including £10 from the University of Liverpool Veterinary School) ...	26	0	0
Dance and Raffle at Eastbourne	112	18	6
Mrs. G. H. Wooldridge	6	10	0
Mrs. W. R. Wooldridge	9	7	6
Scottish Branch Subscriptions and Donations ...	81	15	6
Ayrshire Dance arranged by Mrs. Stewart ...	85	1	0
Dumfries Dance arranged by Mrs. Sangster ...	72	0	0
Penrith Dance arranged by Mrs. Reid	85	10	0
Sale of Tomatoes at Moredun	3	0	0
	£679	12	6

A special vote of thanks to Scotland for the magnificent total once again achieved was carried with enthusiasm.

Allocation of Money.—It was resolved to allocate the following sums :—

	£	s.	d.
National Veterinary Benevolent and Mutual Defence Society	20	0	0
V.V.B.F. Donation for relief during the current year	200	0	0
V.V.B.F. Donation for Christmas and Summer Gifts Fund	450	0	0
	£670	0	0

Sir Alan Hitchman, Permanent Secretary to the Ministry of Agriculture and Fisheries, has been appointed Chairman of the Agricultural Improvement Council for England and Wales in succession to Sir Donald Vandepeer, who retired from public service in September.

THE CLOSING MEETING

(Adjourned Annual General Meeting)

Induction of Mr. Alistair M. Graham as President

The adjourned annual general meeting (the closing meeting of the Congress) was held in the Royal Hall, Harrogate, on Saturday, September 13th, 1952, at 10 a.m., with the retiring President, Mr. Alan J. Wright, M.R.C.V.S., in the chair for the first part of the proceedings.

Matters Arising During the Congress

The President : Ladies and gentlemen, the first item on the agenda for this closing meeting is matters that have arisen during the Congress, and I will ask the Secretary if there are any matters to bring forward.

The Secretary (Mr. F. Knight) : Mr. President, I have not been advised of any matters that have arisen during the Congress which should be brought to the notice of this meeting.

Resolutions

The President : The second item on the agenda is resolutions. I will ask the Secretary if he has any resolutions to bring forward at this meeting.

The Secretary : Again, sir, no resolutions have been reported to me on matters discussed at the other meetings of the Congress.

Votes of Thanks

The President : Item 3 is votes of thanks, and I will first call on Mr. Alex. Thomson to propose a vote of thanks to the Mayor and Corporation of Harrogate and to the civic authorities.

Mr. A. Thomson : Mr. President, ladies and gentlemen, I think the motto of Harrogate might be "We welcome the stranger within our gates," because undoubtedly a great part of the success of this Congress has been due to the facilities and the welcome which the Corporation here have given us.

We have had an extremely good welcome from the Mayor—a kindly gentleman—and the facilities granted in the Royal Hall have been excellent for the purpose of our meetings.

I should like, therefore, to ask you to accord to the Mayor and Corporation a very cordial vote of thanks for the facilities they have offered us. (Applause.)

The President : Can I have a seconder ?

Mr. J. M. Ingram : I have great pleasure in seconding.

The proposition was put to the meeting.

The President : That is carried.

The second vote of thanks is that to readers of papers, openers of discussions, chairmen and recording secretaries, those responsible for the showing of films on surgical operations on small animals, and the Ministry of Agriculture for their exhibit of specimens. I call on the Hon. Secretary, Mr. Hebeler, to propose this important vote of thanks.

Mr. H. F. Hebeler : It is my pleasure and privilege to propose this vote of thanks to, first of all, readers of papers. After some short experience of provisional committees I have come to realise how important this matter is to Congress since it is one of the main reasons for holding the Congress, and I think you will agree that we have had a most excellent series of papers during the past week.

The openers of discussion have a heavy responsibility in seeing that the discussion is well started, and I am sure you will applaud the way that this year they have carried out this duty. The hall has been well filled throughout all the meetings and the contributors to discussion have contended very well

with the difficulties of speaking from this platform while the curtain is up.

The usual Ladies' Plate took place again this year and, in spite of having a man on the platform as was essential, I thing they carried it off rather better than usual. (Laughter.)

We have had some excellent control of the meetings by the chairmen, and the recording secretaries' spelling this year has been rather beyond the standard one has seen at Congresses !

This year, again, we have had a gala *première* of films with a personal appearance of the chief star, and we must cordially thank those responsible for that appearance and for the films. They were indeed most excellent.

The Ministry of Agriculture we must thank for the exhibit on swine fever, which has appeared in the exhibition hall. I wish I could get someone to clean up my swine fever specimens so nicely before I have to diagnose the disease, but I may of course be able to get in touch with the technician at Weybridge !

Another thing we must thank the Ministry of Agriculture for is the personal appearance of one of their bright stars who is shortly to be one of ours. His paper, although for members of the Association only, was indeed most valuable.

To all these persons who have given us help at this Congress I would ask you to accord a very hearty vote of thanks. (Applause.)

The President : The last vote of thanks is that to the President and members of the Yorkshire Division, for their hospitality at the informal " At Home " on the eve of the Congress and for the valuable assistance given by members of that Division in the work of the Provisional Committee, and also to the Provisional Committee for so successfully organising the Congress, and especially to their worthy chairman, Mr. J. O. Powley, and the hard-working secretary, Mr. K. G. Towers.

It is with the greatest pleasure that I propose this from the chair.

Our delightful week with you here in Harrogate could not have had a more pleasant send-off than that which we all enjoyed with you on Sunday evening, when with typical Yorkshire hospitality you made us all feel thoroughly at home. Mr. President, and all members of the Yorkshire Division, on behalf of us all, I do thank you. Particularly do I wish to thank the Provisional Committee for organising the Congress, especially their worthy Chairman, Mr. Powley, and their Secretary, Mr. Towers. (Applause.)

From the commencement this Committee has worked as a team, most willingly and efficiently, and have always been anxious to do everything in their power to ensure that this 70th Congress would be of the highest standard and a great success. We are indeed grateful to them, and hope they will be recompensed for their services and labours by the knowledge that the Association has had an extremely successful and enjoyable Congress.

To the ladies of Yorkshire who have helped in many ways we also express sincere thanks and appreciation. (Applause.)

Presentation to the Hon. Local Secretary

The President continued : Mr. Powley and the Committee will, I know, agree that they would not have been able to produce a Congress like this without the services of an able and hard-working secretary, and that we have all been very fortunate in having Mr. Towers to fulfil so successfully this onerous position. I have never known a man who could carry out his duties so ably and efficiently and yet so inconspicuously. He has done everything that has been asked of him and has worked in close co-operation with the headquarters staff. I can assure you, Mr. Towers, the B.V.A. appreciates greatly all you have done.

It is their wish and pleasure that a small presentation should be made to you on their behalf as a token of recognition of the services you have so ably rendered to them in the organisation and the running of this Congress. Mr. Towers, would you just step forward. . . . Mr. Towers, I have the greatest pleasure in presenting you with this inscribed watch as a small token of the great appreciation and thanks of all members of this Congress for the noble work you have done for the benefit of all of us.

Mr. K. G. Towers then received the presentation, amid loud applause, and said : Thank you, Mr. President. I accept this watch, with very many thanks indeed, as a mark of respect to all who have participated in the organisation of the Congress.

I want to say thank you to the Committee, which it has been such a pleasure to serve. They have been so capable and efficient that my work has been rendered relatively easy.

I must add a word of thanks to Mr. Knight and the headquarters staff, whose reliability is so very well known at any rate to those who have persistent contact with them. Not only the Association but the profession owes a very great debt to the administrative machinery at Gordon Square. (Applause.)

For one thing I must apologise to you, and that is the weather. There is much scenery in Yorkshire and I regret that not enough of it has been seen. We hope that when you come again to Yorkshire the weather will be better. We hope that that time is not far off, and by that time the Yorkshire Society will probably have undergone a slight modification in its name. Ladies and gentlemen, I thank you. (Applause.)

The President : I said earlier in the Congress that there would be an opportunity for visitors and delegates to express and convey any greetings they might have. Now is the time for that opportunity, and I will call on Mr. Knight to read some letters and telegrams he has received.

The Secretary then read a message received on behalf of Veterinary Association of Holland and a telegram from Dr. J. T. Edwards.

The President : Would anyone else like to address the meeting ?

Mr. R. H. Heywood, B.V.Sc. (Australia) : Mr. President, ladies and gentlemen—a year ago at Eastbourne, having enjoyed the hospitality of your Association on 15 former occasions, it was with some diffidence, and perhaps even discomfort, that I spoke as a guest from overseas.

To put it mildly, it seemed to me that the welcome of a guest who just dropped in, as it were, and stayed for 15 years, must be wearing a bit thin. (Voices : " No.")

On this occasion, at Harrogate, therefore, I welcome the opportunity personally, and on behalf of the other Australians fortunate enough to be present—Mr. Kesteven, Mr. Montgomery, who incidentally is a member of the Council of the Australian Veterinary Association, Mr. Johnstone and Mr. Newton—to thank you for having given us the chance to attend and for your generous hospitality.

I have also to extend to your Association the greetings and best wishes of the Australian Veterinary Association which, together with the High Commissioner for Australia, I have the honour to represent.

In conclusion, Sir, may I mention a personal and very special reason which I have for looking forward to these meetings. By a strange set of circumstances in recent years I have drifted far too far from the veterinary profession and these meetings give me an opportunity to renew my acquaintance with you. If I have deserted it to some extent, as the

London Representative of the Australian Meat Board, I have come to realise more and more the importance to a troubled world of the veterinary profession. (Applause.)

The PRESIDENT : Are there any other messages or does anyone else wish to speak ? . . . Then we go on to the next item.

INDUCTION OF NEW PRESIDENT

The PRESIDENT : Ladies and gentlemen, as I rise to address you for the last time as your President I do so with what I can only describe as a lump in my throat (I understand from past Presidents that this is quite a common occurrence), and also with very mixed feelings. Firstly, it is with feelings of regret for this year has been a milestone and a very memorable year in my life. Naturally, it is a year that I shall always look back on with pride and joy. During such a year one can renew old friendships and make new friendships, and can have the opportunity of meeting and mixing with distinguished people and people in all walks of life, in other professions and organisations. I have been touched by the welcome I have received everywhere I have gone, but regret that I have not accomplished all I had hoped and intended to do. Some of these things I have managed to accomplish and complete, but I am afraid that I have left many things undone or only started and it is for you, my successor, to complete them.

One of my regrets is that I have not been able to attend and visit all the Divisions. When I took office it was a very firm resolution I made that I would try to visit every Division that forms part of this Association. But I do ask those representatives here of Divisions I have not been to, if they will forgive me, because I do realise now that unless with a Comet or some other very fast means of transport it is almost a sheer impossibility for a President to get round to every Division.

Besides the feelings of regret, it is also with certain feelings of relief that I hand over my office and shed some of the responsibilities from my shoulders. But in doing so I promise my successor and the Association that I will continue to take a very active interest in it and give every help and support that I can.

Before I leave there are some thanks that I really must voice. First, to my Senior Vice-President, Mr. John Hodgman. Mr. Hodgman has been a continual source of strength to me throughout my whole year of office and I have always found him at my side, and I can assure you, ladies and gentlemen, that he has been a great help indeed both to me and to the whole Association.

To the other officers, my Junior Vice-President, the Secretary and the worthy Treasurer, I do say thank you.

To the chairmen of all committees and the committees themselves, to the members of Council, and, in fact, to all the members of this great Association I do express my sincere thanks and appreciation for all the loyalty and support and help I have received from every section of it.

Another very important group of people who play such an important part in the life and work of the Association is the staff at 36, Gordon Square. Mr. Knight, Mr. Brown and Miss Smith, I do thank you for the loyal support and help I have received from you and your staffs throughout the whole year. Hours have not mattered ; whatever we have asked you to do has been done willingly and efficiently.

Lastly, I cannot let this moment pass without publicly thanking my colleagues at home, both professional and lay, for I can assure you that without their help, without their willingness to take on extra duties and responsibilities, I could not have carried out the duties of this office ; I go so far as to say I am certain that without the help and co-operation of his colleagues and lay staff that he leaves at home no practitioner could carry out this task. I do extend to them publicly my sincere thanks, not only on my own behalf but also, I am sure you will agree, on behalf of the Association.

To you, Alistair Graham, I do promise every help and support, and, you may have no fear, in the future there will always be someone at your side, ready to help and advise if you need any assistance.

After then inducting the new President, Mr. Alistair M. Graham, into office, Mr. Wright continued : Alistair M. Graham, in placing upon you this gown and chain, the symbols of your office, I do so with the knowledge that in you we have a man of sterling character and ability, who will fulfil his office with honour and dignity. May I be the first to congratulate you. (Applause.)

The PRESIDENT (now Mr. Alistair M. Graham) : I do thank you most sincerely, ladies and gentlemen, for the very kind way in which you have received my induction, and you, Sir, for the many flattering and kind things you have said about me.

I fully realise the great responsibilities which the position of President carries, and I hope that with your help I may be able to discharge them. It is the knowledge that I can always obtain assistance and guidance from my colleagues in the B.V.A. which has braced me up to assume these responsibilities.

I should now like to try to tell you, Sir, how much we of the British Veterinary Association are indebted to you for the vast amount of work you have done during your year of office and the tactful and able manner in which you have conducted the affairs of the Association and dealt with many difficult situations and problems.

You have always been the perfect diplomat, however awkward the situation, and you have brought harmony into our negotiations and deliberations. I doubt if the Association has ever had a more conscientious or assiduous President, or one who could gauge the feelings and thoughts of the members more accurately, than you. You do get to the core of things and you have the happy knack of seeing quickly the real points at issue. These are great attributes for a President and you, Sir, have been endowed with them.

I do not want members to infer from these remarks that when the occasion demanded you did not fight for our rights. Ladies and gentlemen, there have been occasions when straight talking has had to be done and we have had to stand our ground, not always under very favourable circumstances. I have seen you, Sir, in quite a few of these situations, and I can assure you, ladies and gentlemen, that you had a most worthy champion. (Applause.) It is these unpublicised occasions which are frequently the great test, and you, Sir, have faced them with courage and considerable success.

I must also thank Mrs. Wright for the part she has played in your triumph. (Applause.) The wife of the President does not see much of the limelight, or of him, but I do know that without her encouragement and support he could not have devoted all the time, energy and thought which he has to the affairs of this Association.

You have already mentioned, Sir, your colleagues at Macclesfield who held the fort during your absence. I also should like to pay tribute to them. I am quite sure that without their help and support you could not have carried on.

Ladies and gentlemen, I know you will show our retiring President in no uncertain way the debt of gratitude we owe to him for all the efforts he has made on our behalf. In the years to come he will be able to look back with great satisfaction on his year of presidency and to the very able way he guided the affairs of this Association. (Loud applause.)

Mr. A. J. WRIGHT : All I can say is thank you very much. (Further applause.)

ROYAL ARMY VETERINARY CORPS JUBILEE

1903-1953

The J. F. Simpson Memorial Plaque to be placed in the Royal College of Veterinary Surgeons

AN APPEAL

October 5th, 1953, is a memorable day in the history of the Royal Army Veterinary Corps, as on that day we commemorate the 50th anniversary of the granting of the Royal Warrant signed by King Edward VII on October 5th, 1903, which brought the Corps into being.

Nineteen fifty-three is therefore our Jubilee Year, and in celebrating it we wish to do honour to the memory of Mr. J. F. Simpson, F.R.C.V.S., whose name will never be forgotten as the champion of the Army Veterinary Department, as it was known in those days, and the man through whose unremitting efforts the issue of the Royal Warrant was due. From 1899 to 1902 he continually brought forward motions at Council meetings of the Royal College of Veterinary Surgeons that representations be made to the War Office for the reorganisation and recognition of the Army Veterinary Department as a Corps. The success of his efforts resulted in the formation of the R.A.V.C.; it is therefore fitting that on this memorable occasion we should show our gratitude and pay tribute to a great man by perpetuating his memory. It is proposed, therefore, to place a Memorial Plaque, suitably inscribed, in the Council Chamber of the Royal College of Veterinary Surgeons.

The Royal College has expressed its readiness to accept such a plaque and a design has been submitted to Council and approved.

A subscription list is now open to all members of the profession who have, at any time, served in the Corps, as it is felt that they would welcome an opportunity of paying tribute to one whose memory holds a very special place in the annals of our Corps. Contributions, which will be gratefully received, may be sent to the Hon. Secretary, R.A.V.C. Officers' Club, The War Office, Droitwich Spa, Worcestershire.

Declaration of Close of Congress

The President: Ladies and gentlemen, it now remains for me to declare this 70th Annual General Meeting closed and to remind you that next year the Congress is going to be held in Aberdeen, between September 6th and 12th. I hope you will all turn up there and give our Scottish friends the gesture which I think they deserve. We have not been in Aberdeen for something like 30 years now and I am quite sure you will enjoy the Scottish hospitality and, particularly the ladies, the Scottish scenery.

Ladies and gentlemen, I formally declare this meeting closed. (Applause.)

QUESTIONS IN PARLIAMENT

ANTHRAX

Mr. Hurd (October 30th) asked the Minister of Agriculture if his veterinary officers have been able to trace the cause of the widespread cases of anthrax among cattle and pigs; and what measures are being taken to stop the introduction of further infection.

Mr. Nugent: Circumstantial evidence suggests that most of the recent outbreaks of anthrax are connected with the use of imported feeding-stuffs. It has not yet been possible to determine which particular ingredients are carrying infection, but enquiries are continuing. My Department is examining the possibility of doing more to ensure that imported bones and bone products are made safe during processing. Infection may also be carried on feeding-stuffs of vegetable origin, but the introduction of infection by this means could only be stopped by ceasing to import the feeding-stuffs.

. . . . . .

Slaughterhouses

Mr. Murray (October 27th) asked the Minister of Food the number of efficient and fully equipped slaughterhouses in Great Britain; how far this figure falls short of the number required; and what steps he proposes to take to improve the present position.

Major Lloyd George: The Ministry is using some 600 slaughterhouses. They vary widely in standards and capacity and a detailed statistical appreciation of their efficiency is not practicable. So far as the capital investment programme permits, we are doing what we can to improve existing facilities and to press on with the completion of the Ministry programme of new building.

Mr. Murray (October 27th) asked the Minister of Food whether he is acquainted with the wholesale method of slaughter of animals in the United States of America; and if he will give consideration to the abolition of some of the old-fashioned methods of slaughter here and the adoption of the efficient methods now in operation in the United States of America.

Major Lloyd George: Factory abattoirs of the American type are not suited to the conditions of this country, but there is great scope for improvements in slaughtering methods. The Ministry of Food have given much study to this subject and the new slaughterhouses now being built are of modern lay-out, incorporate the most up-to-date equipment and compare very favourably with the methods in operation anywhere in the world.

. . . . . .

Research Station, Porton (Members' Visits)

Mr. Emrys Hughes (October 27th) asked the Minister of Supply if he will arrange a visit of hon. Members to the bacteriological and chemical research station at Porton.

Mr. Sandys: Various establishments of the Ministry of Supply are from time to time visited by the Select Committee on Estimates. Should this or any other committee set up by the House require to visit the establishments at Porton, I shall be glad to afford all necessary facilities.

Mr. Hughes: Could not these facilities be extended to ordinary Members of Parliament who are not on these committees? Could the Minister tell us why there is this iron curtain of secrecy round this bacteriological research station? Is he aware that last week the Prime Minister complained that a large amount of public money had been spent on the atom bomb without Parliament knowing anything about it? Is this being repeated in the case of the bacteriological research at Porton?

Mr. Sandys: Visits to any of these establishments inevitably interrupt the work of the senior staff, who have to show people round. I am sure that the House will support me in trying to limit visits to those which are really necessary.

. . . . . .

Day-Old Chicks (Import)

Mr. Baker White (October 29th) asked the Minister of Agriculture why day-old chicks have been imported recently from Denmark and the Netherlands; and what arrangements have been made for future importations.

Sir T. Dugdale: Imports of day-old chicks are on open general licence, and there are consequently no restrictions on importation other than those imposed under the Disease of Animals Act. Under the Poultry and Hatching Eggs (Importation) Orders, 1947 and 1952, imports from Denmark are permitted under conditions designed to secure that the chicks are free from disease, but owing to the

existence of fowl pest in that country imports from the Netherlands are prohibited and none have taken place recently.

. . . . . .

SLAUGHTERHOUSES, KENT

Mr. BOSSOM (October 30th) asked the Minister of Food (1) whether in anticipation of further outbreaks of foot-and-mouth disease in Kent, he will provide emergency slaughterhouses with storage and drying-out facilities ready to be put into operation when needed ;

(2) whether in view of the efforts that have been made by farmers to increase pig production, he will provide additional slaughterhouses and storage capacity in Kent, so that they are adequate to deal with the larger numbers of pigs to be slaughtered.

Major LLOYD GEORGE : A new slaughterhouse is being built at Canterbury. This will shortly come into operation and will provide substantially increased slaughtering capacity for Kent. My Department, in conjunction with the National Farmers' Union, is examining a scheme for bringing into use some existing unused slaughterhouses in the event of further outbreaks of foot-and-mouth disease.

. . . . . .

RABBIT PEST

Mr. BOSSOM (October 30th) asked the Minister of Agriculture whether he will give some help to farmers in their campaign against the rabbit pest, particularly when the rabbits come from adjacent railway embankments or woods not under the control of the farmers afflicted.

Sir T. DUGDALE : It is the responsibility of landowners and occupiers to keep down rabbits on their own lands. Where the rabbits are coming from adjoining lands the Ministry, with the support of the National Farmers' Union and Country Landowners' Association, urges the several land interests to get together to kill the rabbits.

. . . . . .

BECHUANALAND (CATTLE-RAISING SURVEY)

Major BEAMISH asked the Under-Secretary of State for Commonwealth Relations what plans the Government has for development of the cattle industry of the Bechuanaland Protectorate.

Mr. J. FOSTER : In consultation with my noble Friend the Secretary of State and with the Chairman of the Colonial Development Corporation, the High Commissioner for Basutoland, the Bechuanaland Protectorate and Swaziland has appointed a small expert mission to carry out a preliminary survey of cattle-raising possibilities in the western part of the Bechuanaland Protectorate. Large areas of this little-known and thinly populated country are reputed to carry good grazing, but the lack of permanent water supplies and of communications has so far hindered development. The mission now appointed will consider, among other questions, whether capital expenditure on development of water supplies, both surface and underground, would be justified, and if so in what areas efforts should first be concentrated.

The Chairman of the mission is Mr. Arthur Gaitskell, C.M.G., lately Managing Director of the Gezira Cotton Board in the Sudan. The other members are Mr. Brian Currie, a Kenya rancher, Mr. C. Pickrell, Director of Extension to the State of Arizona, U.S.A., Chief Bathoen of the Bangwaketse tribe in the Bechuanaland Protectorate, Mr. Tshekedi Khama, and Colonel L. van der Post (who will be in charge of the organisation of the expedition).

The mission is assembling in the Protectorate now.

. . . . . .

FOOT-AND-MOUTH DISEASE

In the House of Lords on October 29th, Viscount LONG asked the Government whether, in view of the recent serious outbreaks of foot-and-mouth disease, there were in force any regulations to ensure that all motor-cars entering this country were disinfected at the United Kingdom port or aerodrome of arrival.

Lord CARRINGTON, Parliamentary Secretary, Ministry of Agriculture, said that no such regulations enforced the suggestion that motor-cars from the Continent should be disinfected. The Ministry considered the risk of spreading foot-and-mouth disease was negligible. The Minister also considered that a regulation which would interfere considerably with the normal course of traffic would not be justified. The matter was one which would be considered by the Gowers Committee, which was now taking evidence.

NOTES AND NEWS

Diary of Events

Nov. 12th.—Meeting of the Editorial Executive Committee, B.V.A., at 36, Gordon Square, W.C.1, 2.30 p.m.

Nov. 12th.—R.S.I. London Sessional Meeting at 90, Buckingham Palace Road, London, S.W.1, 2.30 p.m.: Benjamin Ward Richardson Lecture on the hygienic and economic utilisation of offal and by-products of food animals, by H. E. Bywater, M.R.C.V.S., Chief Veterinary Officer, West Ham. Chairman: Sir Weldon Dalrymple-Champneys, Bt.

Nov. 13th.—Meeting of the Society of Practising Veterinary Surgeons at Dumfries (Station Hotel), 11.30 a.m.

Nov. 13th.—Autumn Meeting of the Dumfries and Galloway Division, B.V.A., at Dumfries (Station Hotel), 2.15 p.m.

Nov. 14th.—Meeting of the Fine Chemicals Group of the Society of Chemical Industry, at King's College, Strand, W.C.2 (Chemistry Lecture Theatre) [Dr. J. Carmichael, C.M.G., D.SC., M.R.C.V.S., DIP. BACT.: "Fine Chemicals in Veterinary Medicine "].

Nov. 15th.—Meeting of the Biochemical Society, in the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1, 10.30 a.m.

Nov. 20th and 21st.—B.V.A. Conference on Metabolic Disorders and Other Problems Related to Grassland and Fodder Crops and Innovations in Animal Husbandry to be held in the Auditorium of the Wellcome Foundation, 183, Euston Road, London.

Nov. 20th.—Research Defence Society's 21st Stephen Paget Memorial Lecture, in the Physiology Lecture Theatre, University College, Gower Street, W.1 (Sir Howard Florey, M.D., F.R.S., "The Advance of Chemotherapy by Animal Experiment "), 5.30 p.m.

Nov. 20th.—Meeting of the Herts & Beds Division, B.V.A., at Luton (The George Hotel), 2.30 p.m.

Nov. 26th.—Annual General Meeting of the North Wales Division, B.V.A., at Ruthin (Council Chamber), 2 p.m.

Dec. 9th.—Technical Development Committee, B.V.A. (to discuss Sheep Diseases Report), 11 a.m.

Dec. 10th.—Technical Development Committee, B.V.A. (Ordinary Meeting), 10 a.m.

Dec. 12th.—Annual Dinner and Dance, North Wales Division, B.V.A., at Llandudno. (See Notice.)

Jan. 1st, 1953.—Dumfries and Galloway Division, B.V.A., Ladies' Guild: Annual Dance in aid of the V.V.B.F., at Dumfries (Cairndale Hotel). (See Notice.)

R.C.V.S. EXAMINATIONS

Pharmacology Examination (Revised Syllabus). Orals and Practicals: Commencing November 10th or 11th, 1952.

Membership Examinations.—Written: Thursday and Friday, December 4th and 5th, 1952. Orals and Practicals: Commencing Monday, December 8th, 1952.

* * * * *

Allocation of New Cars

The B.V.A. has on its files the names of many members whom it has tried to assist in obtaining new cars but from whom it has had no communication for some time. The General Secretary would like to hear from these members whether they have now taken delivery of the car for which a priority certificate was issued or whether they require any further help.

R.A.V.C. JUBILEE

The J. F. Simpson Memorial Plaque Appeal

It is with considerable pleasure that we draw attention to an Appeal, published on page 715 of this issue, which is being made in connection with the proposal to erect a commemorative plaque at the entrance to the Council Chamber of the Royal College of Veterinary Surgeons, dedicated to the memory of Mr. J. F. Simpson, F.R.C.V.S., and recording for all time his association with the granting of the Charter which brought the Army Veterinary Corps, subsequently honoured by the title "Royal," into existence.

The year 1953 marks the Jubilee Anniversary of the Royal Army Veterinary Corps and the proposed memorial is appropriately timed to give significance to the attainment of the Corps' 50th year of honourable history. The memorial's primary object, however, will be to give expression, in a suitably dignified form, to the desire of officers of the Corps, serving and retired, to place on record their acknowledgment of the great debt they owe to a distinguished member of the profession, who, although himself a civilian, devoted so much of his time and energy to furthering successfully the interests of the Army Veterinary Department —efforts which culminated in the granting of the Charter.

In honouring the memory of Mr. Simpson, the Corps does itself honour and at the same time further strengthens the ties of warm regard and mutual esteem which already exist between the civilian and military members of the veterinary profession.

We strongly commend the Appeal to the favourable attention of our readers, confident in the expectation that it will meet with an immediate and generous response, not only from Regular officers of the Corps, but also from that much larger proportion of the profession who served in the Royal Army Veterinary Corps in the course of one or other of the two World Wars.

* * * * *

R.C.V.S. WAR MEMORIAL

As was announced in our issue of last week, the R.C.V.S. 1939-1945 War Memorial has now been carved and is ready to be placed opposite the 1914-1918 War Memorial, to which it is similar in design, in the principal entrance to the Royal College at 10 Red Lion Square.

A ceremony will be held to unveil the Memorial on the afternoon of Friday, February 6th, 1953. As the entrance hall is too small to accommodate the numbers who may desire to be present, the actual ceremony will be held either in the Council Chamber or in some other building in London suitable to the purpose, but this is dependent on the numbers to be accommodated.

A letter has been sent to all the known next of kin of the deceased members. If, however, anyone has not received such a letter, would they communicate with the Registrar, R.C.V.S.

The President is anxious to know the approximate numbers to be accommodated. He would ask, therefore, if anyone who desires to be present would write to the Registrar, R.C.V.S., not later than Monday, November 17th, 1952, if possible indicating whether the writer has any particular connection with any one of the deceased members. When some idea has been reached of the numbers to be present a decision will be made as to the time and place of the ceremony and as to how many can actually be accommodated.

The War Memorial contains the following names:—

Killed in Action	*Missing in Action*
Beckett, W. E.	Chaudhri, C. P.
Comrie, K. G.	Clune, J. J.
Jonas, A. C.	Dunwoody, R.
Keast, P. H. J.	Fyfe, A. M.
Lester, L.	Greeves, D. H.
McDougall, K. D.	Howie, A. M.
Morris, L. T.	Lamb, E. M.
Patterson, J. R.	Peyton, A. W.
Rutherford, G.	Taylor, D. W. B.
Urquhart, J. W.	

Died of Wounds	*Died whilst Prisoner of War*
Bhardwaj, V. R.	McCrea, A. G.
Ellis, A. A. B.	Stelle, A. P.

Died on Active Service

Brocklehurst, F. B.	Maclean, B.
Heard, J.	O'Brien, F. N.
Jones, J.	O'Donel, S.
Kelly, A. J.	Orr, W.
Kirk, M.	Pryer, A. A.
Lang, J.	Richardson, W. T.
Lloyd, G.	Soothill, P. L.
McCubbin, W. J.	

* * * * *

Re Grassland Conference

Those who have sent slips applying for Conference tickets will receive these in due course, together with a note about luncheon arrangements.

Those who have not yet applied for tickets are reminded that a programme of the Conference was included in the October 18th issue of *The Veterinary Record*. At the bottom of the programme a slip is attached on which members are asked to apply for tickets, etc., to the General Secretary, 36, Gordon Square, London, W.C.1.

* * * * *

PERSONAL

Marriage.—Clarkson—Millar.—On October 22nd, 1952, at Riggindale Road Methodist Church, Streatham, S.W.16, Kenneth John Norbury Clarkson to Marjorie Elizabeth Millar, M.R.C.V.S. Address: 67, Edwarebury Lane, Edgware, Middlesex.

. . . . .

Illness of Dr. F. C. Minett.—Members will be sorry to learn that Dr. F. C. Minett had to undergo a major abdominal operation in Addenbrooke's Hospital, Cambridge, on October 24th, 1952. We are glad to be able to inform them, however, that the authorities are satisfied with his progress to date.

. . . . .

Exchange Between Children of British and French Veterinary Surgeons.—If any member would be interested to send his daughter to France during the autumn, winter or spring, and in exchange receive into his home a French child during the summer, would he please get in touch with Mr. Peter Hastie, M.R.C.V.S., Barrow Hill House, Ashford, Kent. The French veterinary surgeon concerned is director of an abattoir at Nice. His daughter is 12 years old, and he would like to arrange an exchange with a girl of similar age. He suggests the summer in England, because the heat in the South of France during the summer months is almost too much, even for local children. More particulars may be obtained from Mr. Hastie.

R.C.V.S. OBITUARY

Gryspeerdt, Louis George, M.R.C.V.S., Captain late R.A.V.C., of 4, Croham Park Avenue, South Croydon. Graduated London, December 16th, 1901. Died October 29th, 1952; aged 72 years.

Penman, David Cameron, M.R.C.V.S., 13, Queen's Crescent, Glasgow, C.4. Graduated Glasgow, July 16th, 1938. Died—very suddenly, at Lenzie—October 29th, 1952; aged 38 years.

Wiggins, Robert Thompson, M.R.C.V.S., 168, Warbreck Road, Blackpool, Lancs. Graduated Liverpool, July 18th, 1928. Died October 25th, 1952; aged 68 years.

Mr. R. T. Wiggins, M.R.C.V.S.

Mr. Robert Thomson Wiggins, whose death we record above with much regret, was born in Preston and had lived in Blackpool for about 14 years. He was well known as a veterinary surgeon and dog judge and had exhibited and judged at many championship shows, including Blackpool's, during the past 40 years. He was hon. veterinary surgeon for the Blackpool and Fylde Show and a member of the Blackpool and Fylde Canine Society. Mr. Wiggins was also a member of the British Collie Club, the Scottish Collie Kennel Club and of the Collie Association.

* * * * *

FOOT-AND-MOUTH DISEASE

After a month without an outbreak, foot-and-mouth disease was confirmed on Tuesday last among cattle at Langney, Eastbourne, Sussex.

* * * * *

HORSE SLAUGHTER INQUIRY

Plea for Inclusion of "Cruelty in Transit" Question

The International League for the Protection of Horses and the R.S.P.C.A., in a joint statement, express "disappointment that the question of cruelty to horses while in transit to slaughterhouses is unaccountably omitted" from the terms of reference of the Government enquiry into the slaughter of horses. Particular concern is expressed that if wild ponies are to be slaughtered it should be done swiftly and humanely in the forest and not after long journeys.

Both the International League and the R.S.P.C.A. would like the following points included in the terms of reference: the conditions under which horses, asses and mules are imported for butchery in this country; the disposal of the flesh of donkeys killed shortly after arrival; the working of the Transit of Horses Order (1951). The societies feel that similar recommendations should apply to the import of horses for slaughter as for their export.

* * * * *

CRUELTY TO HORSES IN NIGERIA

"Ritual Slaughter"

"Cruelty to horses involving a trek of 400 miles across Nigeria with a horrible and painful death at the end, performed in secret to conform with native ritual, has (says *The Times* in its issue of October 14th) come to light through investigations carried out by officials of the Lagos branch of the R.S.P.C.A. This is the first overseas branch of the Society, and it was established soon after the end of the war.

"Sir John Macpherson, the Governor of Nigeria, is patron of the Society's Nigerian branch and both he and the veterinary officers of the country take an active interest in its work. At the London headquarters of the Society, however, it is felt that if this cruelty, which is of long standing, is to be stamped out initial action must be taken in this country.

"The Secretary of State for the Colonies, replying to a question in the House of Commons in June, said that both he and the Nigerian Government were much concerned about this cruel native practice. Instruction in the use of humane killers, he added, was being given and the introduction of legislation to make their use compulsory was being kept in view.

"The Chief Secretary of the R.S.P.C.A., Mr. A. W. Moss, in London last week gave an account of what happens in Nigeria when horses become too old for work. He told a representative of *The Times* that hundreds of horses are walked from the northern to the eastern province of Nigeria and then barbarously killed in ceremonies known as 'second burial' and 'horse title.' The customs were confined to a limited area of eastern Nigeria and were of long standing. It was the official view that as education spreads in the colony these practices would gradually diminish. The Nigerian Government had hoped to establish knackeries in the northern region of Nigeria to which aged and decrepit horses could be brought for humane killing, but owing to the cost and the long distances the horses would have to travel, the project had been abandoned.

"What the Society favoured was the introduction of legislation to make such practices illegal. If that was considered impracticable and the horses, which were bred for riding and agricultural purposes in the northern province, had to end their days by being driven hundreds of miles to slaughter, the alternative was to ensure they were killed without unnecessary cruelty.

"With this end in view the Society was contemplating raising funds to provide knackeries and humane killers in Nigeria. So far the Society had provided humane killers at a cost of about £500 and veterinary surgeons on the spot were instructing natives in their use. This, however, did not affect the problem of the ritual killing of horses and it was estimated that an additional £3.000 at least would be required for the consignment of a further 200 humane killers and ammunition.

"Officials of the Society in Nigeria believed that the Ibos of south-eastern Nigeria would be content for the horses to be killed humanely. If that were arranged the superstitious practice to which they gave credence could still be maintained. The horses would still have to endure the cruelty of the trek but those which survived would at least receive a merciful dispatch."

* * * * *

ANIMAL WELFARE IN INDIA

Professor William L. Weipers, of the Chair of Veterinary Surgery, presided over a meeting held in Glasgow University on October 22nd, arranged by the Glasgow and West of Scotland Society for the Prevention of Cruelty to Animals and the University of Glasgow Animal Welfare Society, addressed by Dr. P. D. Kapur, hon. Secretary of the India Society for the Protection of Animals, London.

Dr. Kapur, who was one of a delegation who went to India to observe how animals were being treated, said apathy and the economic situation had resulted in some cases of passive cruelty. The Indians were not deliberately cruel, and had a tradition of regarding all life, animal as well as human, with reverence. The difficulties of earning a livelihood sometimes made them overwork and ill-treat their animals.

The Society were hoping to raise the money for some mobile dispensaries, which would do something to help solve the problem of animal welfare in India, by treating animals without cost to the owners.

* * * * *

UFAW'S POLICY IN RELATION TO RABBIT TRAPPING

Included in a recently issued leaflet, "Facts about Rabbits and Rabbit Trapping," the Universities Federation for Animal Welfare makes the following declaration of policy on rabbit trapping, which "has been drawn up after extensive consultation with persons having expert knowledge of the subject":—

1. Rabbits should be eradicated by the methods described in *Instructions for Dealing with Rabbits*.

2. All practicable steps should be taken to bring the commercial exploitation of rabbits to an end.

3. (i) Area schemes for the elimination of rabbits should be organised whole-heartedly in conjunction with general land-improvement; (ii) such schemes should be radical and not, therefore, expected to pay for themselves except by the increased productivity of the land; (iii) farmers who cannot afford to pay for the whole cost of rabbit eradication should receive some proportion of unpaid help from county pest control staffs.

4. The Minister of Agriculture's legal powers should be wholeheartedly used against owners and occupiers of land who harbour rabbits. Legislation giving power to insist on the destruction of rabbit harbour, and possibly also removing conies from the ambit of the game laws, should be seriously considered.

5. (i) The practice of torturing an animal all night for any purpose is morally wrong; (ii) hence the gin trap ought to be abolished by law without further delay. (iii) The fact that initial gin trapping can pay the cost of a subsequent rabbit clearance campaign, though indisputable, does not afford a moral justification of that expedient.

OFFICE INTERNATIONAL DES EPIZOOTIES

Conclusions of the Conference on Foot-and-Mouth Disease

(Copenhagen, September 22nd to 27th, 1952)

The above Conference, which was held from September 22nd to 27th, 1952, in Copenhagen under the auspices of the International Office of Epizootics (Office International des Epizooties) was attended by delegates from the following 22 countries: the German Federal Republic, the German Democratic Republic, Argentina, Austria, Belgium, Brazil, Canada, Spain, Denmark, the United States of America, Finland, France, Great Britain (Dr. Galloway and Mr. Brennan), Ireland (Mr. Rogan and Mr. Timoney), Greece, Italy, Luxembourg, Norway, Netherlands, Sweden, Switzerland and the U.S.S.R., in addition to representatives from the Food and Agriculture Organisation (FAO) of the United Nations (Dr. Kesteven and Sir Thomas Dalling) and the Pan American Foot-and-Mouth Disease Centre.

Having considered the reports presented concerning the measures taken to control foot-and-mouth disease on an international basis, the Conference arrived at the following conclusions:—

1. The delegates re-affirm that the vaccine of which the preparation, properties and control have been defined on several occasions by the special commission and the committee of the International Office of Epizootics gives the expected results. It is confirmed that its efficacy is in strict relation to the antigenic specificity of the strains employed in the production of the vaccine and that its application should be carried out according to the instructions of the Office, under the direction and supervision of State veterinary services.

As a result of collected observations made during recent years they note that the culture of virus in tissue maintained in a state of survival according to the technique of Frenkel is capable of furnishing an abundant amount of antigen of good quality.

They regret that the authors of reports presented on products dealt with in Press communications failed to furnish either the scientific information necessary to repeat tests in other laboratories or sufficient proof of field trials.

In conformity with the several resolutions emanating from the Office since 1939, the Conference insists that vaccines can be utilised in practice only when their innocuity and their efficacy have been recognised by the State.

2. It is desirable that a uniform method of control of the efficacy of vaccines be developed for all official establishments responsible for this control by the State. The assembly now recommends that the test of innocuity that each State should prescribe is the intralingual inoculation of vaccine: the numbers of observations made to be sufficient to give the greatest degree of significance to the test. Until the Office proposes such a method, each country ought to make its own arrangements, using as a basis the resolutions of the Bern Conference in 1947. In accordance with article 2, paragraph 1 of the agreement reached at Bern in November, 1951, the assembly recommends to the Office that it should endeavour to effect the setting up of an international research institute.

3. The delegates confirm the previous observations made, that in general, immunity is established from the fifth day and that it is adequately maintained until the 15th day, with the following reservations: vaccines prepared from some strains of virus initiate a slower development of immunity and animals whose metabolism is temporarily disturbed by any cause (parturition, fatigue or disease), also young animals, sometimes exhibit a later development of immunity.

4. The delegates having considered the reports on the use of polyvalent vaccines presented at the meeting, recognise the great practical interest of these products. However, the observation of certain phenomena not yet elucidated does not, for the time being, permit of a recommendation for their general application.

They consider that researches ought to be carried out in this field in order that the deficiencies observed should be eliminated in as short a time as possible.

5. The Conference again recognises the great advantages to be gained by directors of laboratories keeping constantly in touch with each other in order to study together the improvements that might be made in the vaccine and in order that measures can be taken to correct certain faults which might creep in.

6. The assembly associates itself with recommendations of the Office concerning alleged remedies of every kind against foot-and-mouth disease. Their sale and their use ought to be forbidden so long as the proof of their efficacy has not been furnished and recognised officially.

7. The assembly associates itself with the conclusions of preceding meetings of the Office on the international importance of sanitary measures which have enabled some countries, by their strict application, to protect themselves against foot-and-mouth disease and others to limit the disease to a few sporadic cases.

ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Anthrax:

Cambs.—Lacier Farm, Grantchester (Oct. 27th).

Ches.—Harthill, Broxton, Chester; Hazelshaw Farm, Brereton, Sandbach (Oct. 28th).

Devon.—Carscombe Farm Stoodleigh, Tiverton; Ruffwell Hotel, Thorverton, Exeter (Oct. 29th).

Dorset.—Adminston Farm, Puddletown, Dorchester (Oct. 25th).

Essex.—Church End, Rickling, near Saffron Walden (Oct. 25th); Heath Farm, Elmstead (Oct. 27th); Abbotts Farm, Felstead (Oct. 28th); Norpits Farm, Canewdon, Rochford; Godfreys Farm, White Notley, Witham (Oct. 30th).

Glos.—Oakey Farm, Moreton Valance (Oct. 29th).

Hants.—Amery Farm, Alton (Oct. 24th); Lobscombe Corner, Stockbridge Road, Nether Wallop, Stockbridge (Oct. 28th).

Kent.—Oak House Farm, Four Elms, Edenbridge; Wingmore Court Farm, Elham, Canterbury (Oct. 24th); Longview, South Street, Stockbury, Sittingbourne; Furnace Farm, Cowden, Edenbridge (Oct. 28th).

Lancs.—Brownlow Farm, Pleasington, Blackburn (Oct. 27th).

Midlothian.—Cuiken Farm, Penicuick (Oct. 29th).

Norfolk.—Hill Farm, Sparham (Oct. 27th); Stobbins Farm, The Lyng, Garboldisham, Diss (Oct. 28th).

Northants.—Home Farm, Lilford, Oundle. Peterborough (Oct. 28th).

Notts.—Dorket Head Farm, Arnold, Nottingham (Oct. 28th).

Somerset.—Rull Farm, Otterford, Chard (Oct. 27th); Writh Farm, Pylle, Shepton Mallet; Manor Farm, West Lydford, Taunton (Oct. 29th).

Staffs.—Bleak House Farm, Knightley, Woodseaves (Oct. 27th).

Suffolk.—Appleacre Farm, Stradishall, Newmarket (Oct. 24th); Street Farm, Laxbridge, Woodbridge (Oct. 27th); The Homestead. London Hill, Debenham, Stowmarket; Thurston End Farm, Hawkedon, Bury St. Edmunds (Oct. 28th); Hill Farm, Barnardiston, Clare, Sudbury (Oct. 30th).

Sussex.—Home Farm, Warnham Lodge, Warnham, Horsham (Oct. 25th); Coopers Farm, Cowfold, Horsham (Oct. 30th).

Warwicks.—The Bury, Offchurch, Leamington Spa (Oct. 25th); Hunningham Coppice, Leamington Spa (Oct. 27th).

Westmorland.—Bryan Houses, Winster, Windermere (Oct. 30th).

Wilts.—Freith Farm, West Lavington, Devizes (Oct. 24th); Church Farm, Marden Bradley, Warminster (Oct. 25th).

Yorks.—Home House Farm, Barden, Bolton Abbey, Skipton (Oct. 24th); Newsam Green Farm, Woodlesford, Leeds (Oct. 27th); Buck House Farm, Laverton, Kirby-Malzeard, Ripon (Oct. 29th).

Fowl Pest:

Cambs.—23 and 27, Benwick Road, Doddington, March (Oct. 26th); 6, Wood Street, Doddington, March; 24, Wimblington Road, Doddington, March (Oct. 29th).

Essex.—Hydewood Poultry Farm, Hydewood Lane, Rochford (Oct. 30th).

Norfolk.—Westways, Deopham, Wymondham; Willow Farm, Southburgh, Thetford (Oct. 24th); Stalland Farm, Deopham, Wymondham (Oct. 29th).

Sussex.—Bayards Farm, Steyning; Horsham Road Poultry Farm, Steyning (Oct. 24th).

Swine Fever:

Beds.—Manor Farm, Lower Dean, Huntingdon (Oct. 28th).

Berks.—The Rise, Finchhampstead, Wokingham (Oct. 27th); Lower Lambdene Farm, Beenham, Reading (Oct. 28th).

Cornwall.—Trenninnick, Newquay (Oct. 29th).

Cumberland.—West View, Temple Sowerby, Penrith (Oct. 27th); Newbiggin Hall, Garden Field. Culgaith, Penrith (Nov. 1st).

Lancs.—" Katoomba," Bells Lane, Lydiate, Liverpool (Oct. 29th).

Midlothian.—Windyvale, Meadowplace Road, Edinburgh, 12 (Oct. 25th).

Norfolk.—East Hall Farm, Munford, Thetford (Oct. 25th); Fen Road, Tilney St. Lawrence, King's Lynn (Oct. 30th).

Oxfords.—Piggeries, Littleworth, Wheatley (Oct. 29th).

Stirlings.—Polmaise Home Farm, St. Ninians, Stirling (Oct. 25th).

Westmorland.—East View, Drybeck, Appleby (Oct. 25th).

Yorks.—Nelsons Yard, Cook Street, Doncaster (Oct. 24th).

The Warble Fly and Other Problems of Hide Improvement

As has already been reported in *The Veterinary Record* (Vol. **64**, page 466, August 9th, 1952), the annual (1952) conference of the International Hide and Allied Trades Improvement Society (Société Internationale pour l'Amélioration des Cuits et Peaux Bruts) was held at Scheveningen, Holland, when the principal topic for discussion by delegates from the 10 countries represented was the warble fly. It was evident that the damage occasioned by this parasite remained the chief source of economic loss to the hide industry, but that the intensity of the attempts to deal with it varied greatly from country to country. In some countries, including regrettably Great Britain, little progress could be reported, whereas in Denmark almost complete eradication of the warble appeared to be a possibility. The principal contributions to the conference may be summarised as follows.

The Warble Fly

Denmark.—Legislation aimed at the extermination of the warble fly was first introduced in 1923 and has been augmented at intervals since. It is incumbent on every farmer to destroy the larvae found in his stock, and the Parish Councils must send appointed men to inspect all cattle some 14 days *before* they are turned out to pasture in spring. If necessary a second visit (this time accompanied by a veterinary surgeon who effects treatment) is paid about four weeks after the first. The farmer must place all necessary assistance at the disposal of the inspectors, and while the Parish Councils meet the costs of inspection if this proves negative the farmer himself must do so if warbles are found in his stock. Any transgression is punishable by fine.

The efficiency of these measures is evident from the decline in the percentage of warbled hides sold to the trade. From April to September, 1922, approximately 23 per cent. of the hides of the whole country were infested. The percentage infestations from South Jutland, North Jutland and the Isles, respectively, were 54, 24·5 and 15. Since 1932 the overall figure has never exceeded 2 to 3 per cent., with small fluctuations due probably to difficulties encountered in applying dressing measures owing to foot-and-mouth disease restrictions. Since 1946 the overall percentage has been from 0·5 to 1 per cent., with rates of 2 to 4 per cent. in South Jutland, approximately 1 per cent. in North Jutland, and complete freedom in the Isles. In 1938, some 105,000 of the 1,620,000 cattle in Jutland were found to be carrying warbles at the first inspection, and by 1951 the number had fallen to only 38,000 out of 1,638,000 cattle examined. Derris preparations are employed in treatment.

England and Wales.—The warble problem is not lessening, for there is really no incentive to the farmer to rid his cattle of the pest. The Ministry of Food continues to purchase animals for slaughter without penalising those which have warbled hides, and while the Warble Fly (Dressing of Cattle) Order is in being, it cannot be said that there is any serious attempt to enforce its provisions. The difficulties inherent in supervising the dressing of over 8,000,000 cattle in the varying conditions of this country are of course appreciable, but the apparent lack of enthusiasm by the authorities concerned has been reported to the I.H.A.T.I.S. as a matter for regret. There have been favourable reports from some farmers concerning the repellent action of "warble paints," and field trials to investigate the merits of such preparations are contemplated.

The percentage of all hides with open warble holes in England and Wales during 1951 was 21·96. The monthly breakdown was as follows: January, 6·79; February, 16·82; March, 26·70; April, 46·06; May, 52·51; June, 51·54; July, 46·15; August, 30·86; September, 19·19; October, 11·07; November, 5·36; and December, 4·46 per cent.

France.—Although the method of treatment (paradichlorobenzene ointment) employed throughout the country is the same, the measures for its application vary from one region to another. In some parts of the country expert dewarblers visit farms and are paid at a rate fixed by an Order of the Prefect. In Brittany, *e.g.*, some 60 to 70 per cent. of cattle owners accept the services of the dewarblers, who pay three visits during the appropriate season. If a breeder prefers to treat the cattle himself, visits of inspection are made to ensure that the requisite dressings have been applied. In those regions in which the employment of dewarblers is not favoured it is incumbent on the farmer to dress affected cattle, and a free distribution of paradichlorobenzene ointment is made for this purpose by the National Centre for the Campaign against the Warble Fly.

Although progress has been hampered this year by severe outbreaks of foot-and-mouth disease, the overall position is showing some improvement. There is a continual decrease in the number of warble holes per affected hide, and hides with more than 25 holes are becoming more rare. At the Paris Auction Sales the catalogue classifications from January to June, 1952, showed that 89·34 per cent. hides were free from warble damage, 9·56 per cent. had from 1 to 10 warble holes and only 1·1 per cent. had 11 warble holes and over.

Specially equipped laboratories for the investigation of the biology of the warble fly and of insecticidal preparation are being set up as part of the new Research Institute for the Hides and Skin Industries at Lyons.

West Germany.—Severe outbreaks of foot-and-mouth disease hampered the warble fly campaign during 1951, but the economic importance of the parasite is widely recognised. Indeed, the view was expressed by Herr W. Freudenberg that the loss of milk and meat equalled that in hides, although experimental proof was lacking.

In Germany there are large areas, *e.g.* Middle Bavaria, which are free from warble flies. The areas of heaviest infestation are the same to-day as they were in 1908, when the last comprehensive survey was carried out.

The possibility that some protection is afforded by as yet unidentified plants possessing pharmacological or larvicidal properties is being explored, and it is hoped to present a considered report in 1953. A feeding experiment with onions proved negative.

Dr. Erich Luhrs, of the Institute of Animal Health, Oldenberg, has carried out intensive research on methods of dressing affected cattle. Preparations containing BHC have so far proved unsatisfactory. Derris preparations have proved the most satisfactory yet available, but they fail to kill the larvae in the last stage of its development. Warble larvae are known to throw out "pus" in the presence of foreign substances and when a derris solution was administered directly on to the stigma plates of individual larvae there was no evidence of lethal activity. Larvae so treated were expelled later at intervals of up to 14 days and found to be viable. It was therefore assumed that the activity of derris preparations is percutaneous, and that possibly the entry into the larvae takes place through the protection of phagocytes. The skin of calves in the region of warble tumours was shown, and an "emulsion of colloidal coal" was rubbed in, care being taken to avoid the openings of the tumours themselves. After 72 hours, carbon particles could be demonstrated in the cells of the larval "pus." It is emphasised that anti-warble preparations should not hinder phagocytic activity.

The upper parts of the digestive tract of the warble larvae have been found to contain undigested leucocytes. Lower down digestion begins, but the nuclei appear resistant and indeed in the rectum there is a homogenous mass with the staining reactions of cell nuclei. When living larvae are placed in warm water they are seen from time to time to emit white clouds that, on microscopic examination, appear to be undigested nuclei. When a larvicidal preparation with Sudan III is rubbed into the skin, again from the sites of tumours, the larval "pus" and abdominal contents both show a blue colouring. It has been concluded that larvicides act as stomach or feeding poisons, not contact poisons.

In larvae which have developed to the stage of plain brown coloration of the epidermis only the tumour pus is coloured by Sudan III or other dyes. The contents of the digestive tract are colourless, and it is believed that such larvae do not take up further nourishment once their cuticulae became coloured, the change into the nymphal stage already having begun. This appears to be the reason why the more mature warbles are not destroyed by derris preparations.

Dr. Luhrs has developed a novel method of "suffocating" larvae *in situ* by stamping out gumplates (20 cm. squares proving the most suitable size) and pasting them over the warble tumour with "an elastic solution of acetoncellulose." The insertion of a piece of flannel impregnated with SO_2 accelerates the action. In some practical trials the backs of affected cattle have been painted over with a cellulose acetate solution in February, and again in March and April, the last time being just before the animals are turned out to grass. On the same day the back is pasted over with plasters of the type described. These plasters have been found to adhere for about four weeks, during which time all larvae are destroyed. Damage to the skins has not been evident.

Holland.—A very active anti-warble campaign is in progress and has the full support of the veterinary authorities. Detailed figures for the regional incidence of infestation are known and the overall decline with the years shows promise of complete eradication: by 1951, the percentage incidence, expressed on a quarterly basis for the Netherlands as a whole, had fallen to the following:

Warble per hide.	1st quarter	2nd quarter	3rd quarter	4th quarter
1 to 3	7·15	13·13	16·40	8·83
4 to 9	2·18	6·67	6·39	1·82
10 or more	1·05	4·64	1·94	0·23

U.S.A.—The percentage incidence of warble infestation has been calculated from a series of 1,385,993 hides examined at 35 centres (distributed over 20 States) between January to September, 1951. Of this number 431,687, or 31·15 per cent., were infested. The infestation was higher during the early months of the year, and in the case of branded (range) steers and cows often the incidence was between 50 and 75 per cent. These figures support the general approximation that about one-third of all cattle hides in the U.S.A. are now damaged by warbles. The Tanners' Council of America has estimated that the annual loss on damaged hides, of which a major part is due to warbles, is well over $20,000,000.

Following these reports from different countries a special scientific session was convened, and was attended by the veterinary and other scientific delegates. Current research problems were discussed freely, including a suggestion by Dr. A. Gansser, of Switzerland, that the loss of milk production due to the warble fly be investigated experimentally. At the conclusion of the relevant section of the conference the following resolution was passed: "This Conference of the I.H.A.T.I.S. is very concerned with the lack of progress in the fight for destruction of the warble fly in many countries. Considerable loss of both meat and milk is known to be taking place, in addition to the large loss of raw material caused by damage to the hide. We would urge all Governments to give them full support by compulsory measures and all other necessary steps to eradicate this menace." It was agreed also that the delegations should inform their respective Governments of their support for the anti-warble fly measures recently advocated by the Office Internationale d'Epizootiologie.

Damage to Grain of Hides and Calf Skins

In England and Wales there has been a marked increase in the incidence of damage to hides owing to scratches and gouges on the grain (hair side), mainly from (a) damage by horns, and (b) damage by barbed wire. Those engaged in the hide industry are of the opinion that horn damage ("horn raking") is becoming more prevalent, and they are strong advocates of de-horning. It seems probable that the increase in damage in large part is associated with present slaughtering measures, whereby cattle are collected at grading centres and then transported to the abattoirs elsewhere. This herding together of strange animals tends to lead to "horning" at the various stages at which the animals are congregated, and de-horned animals may be damaged by beasts with horns. Some tanners have found that 60 per cent. or more of hides, particularly cow hides, have suffered damage from scratches or gouges at some period in life, but that the greater part is due to gouges of recent origin.

The second main cause of damage to the grain of hides, and to a lesser extent of calf skins, is barbed wire, and the extensive use of this in connection with the Attested Herds Scheme appears to have increased the incidence.

Damage to calf skins, the pelt of which is exceedingly tender, may occur from thorn scratches, prodding during droving, protruding bolts in transport vehicles and, apparently, from the sharp hooves of pigs transported in the same vehicle.

In some countries there is considerable damage to hides from the scratches of curry combs, and in West Germany all manufacturers have been requested to produce combs with blunt teeth.

Follicular Mange

Hide damage from lesions associated with *Demodex folliculorum* has been extensive in West Germany during 1951-52, in imported as well as in home-produced hides. It appears that malnutrition after dry and hot summers favours the spread of the parasite. The problem is being studied by the Tierärztliche Landersuntersuchungsampt of Stuttgart.

Alastair N. Worden

* * * * *

THE UNIVERSITIES FEDERATION FOR ANIMAL WELFARE

In the past, readers have always shown interest in the work and activities of UFAW. It is therefore our pleasure to mention the attractive Christmas and postal cards (designed by Fougasse for UFAW) wrapping ribbons and tapes, etc., issued by the Federation and providing an original diversion from the usual Christmas stationery: also a general knowledge competition designed to engage the liveliest of minds. It is hoped that readers will avail themselves of this opportunity of supporting the important and sometimes overlooked work of this active organisation, which depends on these sales for a large proportion of its annual income.

Full particulars may be obtained from the Business Secretary, UFAW, 284, Regent's Park Road, Finchley, London, N.3.

LEVERHULME RESEARCH FELLOWSHIPS, 1953

Application is invited for Fellowships and grants in aid of research. The Fellowships and grants are intended for senior workers who are prevented by routine duties or pressure of other work from carrying out research. They are limited to British-born subjects normally resident in the United Kingdom. In exceptional circumstances the trustees may waive the condition as to residence.

The trustees are also prepared to consider applications from groups of workers engaged upon co-operative programmes of research particularly from those engaged upon long-distance programmes.

The duration of the awards will not normally extend over more than two years or less than three months and the amount will depend on the nature of the research and the circumstances of the applicant.

Forms of application may be obtained from the Secretary, Miss M. Branney, Leverhulme Research Fellowships, 3-5, Salisbury Square, London, E.C.4, telephone: City 1910.

Applications must be received *on or before December* 31*st*, 1952. Awards will be announced in May and will date from September 1st, 1953.

* * * * *

ROYAL ARMY VETERINARY CORPS

The following announcements are made in *The London Gazette* (*Supp.*) dated October 24th, 1952:—

National Service List.—Private Edgar William Faulkner Hockenhull to be Lieut., September 5th, 1952; Frank McLinden Emmett to be Lieut., September 15th, 1952.

* * * * *

DIETARY FACTOR IN "TWIN LAMB DISEASE"

Mr. J. D. Paterson, M.R.C.V.S., of Wye College Investigation Department, made a suggestion at a Tenterden, Kent, meeting (states *The Farmers' Weekly*) that low intake of the starchy fraction of the diet of ewes in lamb may be a cause of "twin lamb disease." Mr. Paterson was discussing the growing prevalence in recent years of certain non-bacterial diseases of sheep. Twin lamb disease happened all over the world, he said, and research had not got very far in finding out the basic cause. But it was known that any sudden or radical change in diet precipitated the disease, and there was evidence from research that it was the starchy fraction that mattered. Grass was at its lowest quality in February and March at the approach of lambing time. Mr. Paterson advised a careful study of the feeding of in-lamb ewes throughout pregnancy.

* * * * *

THE INTERNATIONAL PHARMACOPOEIA

The eleventh session of the W.H.O. Expert Committee on the International Pharmacopoeia was opened in Geneva on October 27th, and, for the eleventh time, Dr. C. H. Hampshire, of London, was elected Chairman. This "enthusiastic tribute," his colleagues emphasised, went to the man who had been principally responsible for the successful publication of Volume I of the International Pharmacopoeia. Other officers appointed by the Committee were: Professor H. Flück, of Zürich, Vice-Chairman; Dr. T. Canbäck, of Stockholm, and Dr. L. C. Miller, of New York, rapporteurs.

The *Pharmaceutical Journal* reports that in opening the proceedings, Dr. Pierre Dorolle, W.H.O. Deputy Director-General, welcomed the two new members of the group, Dr. P. Valenzuela, of the Philippines, and Professor J. L. Andrade, of Venezuela. Dr. Dorolle reported that since the publication of Volume I of the International Pharmacopoeia in English and in French a number of member States of W.H.O. and national organisations had indicated that they were using the book in establishing or revising their own pharmacopoeias.

The work to be done at this session of the Committee included: (*a*) Completion of Volume II of the first edition; (*b*) further work on the addendum to the first edition; and (*c*) a scheme for the preparation of a second edition.

The Sub-Committee on Non-Proprietary Names met on November 3rd and 4th. The experts attending this meeting were: Dr. Hampshire, Professor Hazard, Professor Baggesgaard Rasmussen, Dr. Lloyd Miller. Over 500 substances have been given international non-proprietary names, and a further 150 proposals from various countries awaited the attention of the Sub-Committee.

* * * * *

"In the meantime, although a [horse slaughter] committee will be starting enquiries, the cruelty goes on. I think we should all do our utmost to reduce it. One way we can help as farmers is by insisting that a horse is sold only to a reputable dealer or slaughtered legally on licensed premises which the farmer knows conforms to decent standards. High prices are often given by the get-rich-quick racketeers, but surely a few pounds is a small price for the farmer to pay for the satisfaction of knowing that an old friend who has served him well and faithfully is despatched with the least possible cruelty."—*Farmers' Weekly.*

U.S.A. FULBRIGHT TRAVEL GRANTS, 1953-1954

The United States Educational Commission in the United Kingdom announces that, under the provisions of the Fulbright programme travel grants are available to citizens of the United Kingdom and Colonies to go to America for an academic or educational purpose, such as study, research, lecturing or the pursuance of other educational activities. They are available for travel to America between June 1st, 1953, and May 31st, 1954, and will cover the cost of direct travel between the candidate's home in the United Kingdom or Colonies and the destination in America. The awards are competitive and full particulars regarding application are obtainable from the Commission at 55, Upper Brook Street, London, W.1.

* * * * *

CRUFT'S SHOW, 1953

The next Crufts Show is on February 6th and 7th, 1953, and it will again occupy the whole area of the Grand and National Halls of Olympia. It has been decided that the layout of the Show should remain the same as in February, 1952, and the judging arrangements for the breeds, obedience tests and best in show competitions will also remain substantially the same.

The area at the far end of the Grand Hall will again be laid out as a reception area for the admission of dogs, veterinary inspection, cloakrooms and dog boxes. We think exhibitors appreciate this arrangement, as they can come straight into the hall where there is ample room for them to line up for veterinary inspection of their exhibits instead of waiting outside the hall during the rush hours.—*Kennel Gazette.*

* * * * *

LIVESTOCK IN ENGLAND AND WALES

The September census of livestock shows that the number of cattle (including calves) declined by 163,000 (2 per cent.) to 7,628,000. Cows and heifers in milk increased by 36,000 (2 per cent.) and heifers in calf by 14,000 (2 per cent.), but dry cows declined by 18,000 (2 per cent.). Bulls and bull calves were down by 8,000 (7 per cent.). In "other cattle," there were decreases of 236,000 in the one year and over classes which occurred mainly in female animals. Other cattle under one year, however, increased by 48,000.

The total number of sheep and lambs increased by 889,000 (8 per cent.) to 12,236,000. Of the sheep one year old and over (which increased by 289,000 or 4 per cent.), ewes for breeding were 299,000 (6 per cent.) higher than a year ago, but shearling ewes declined by 40 000 (3 per cent.). Sheep and lambs under one year old increased by 601,000 (13 per cent.).

The total of all pigs again showed an increase and now reaches 4.103,000. Sows in pig increased by 28,000 (13 per cent.) but gilts in pig and other sows kept for breeding fell by 24,000 (9 per cent.). Boars being used for service increased by 1,000 (6 per cent.), but young boars were fewer by 3,000 (23 per cent.). Other classes of pigs totalled 3,570.000, an increase of 541,000 (18 per cent.).

There was a fall of nearly 100,000 in fowls (a reduction in adult birds but an increase in those under six months); turkeys, however increased by 204.000 (24 per cent.), ducks by 113,000 (7 per cent) and geese by 21,000 (3 per cent.).

* * * * *

ERRATA

"The Administration of a Procaine Penicillin Feeding Supplement to 'Runt' Pigs (A. N. Worden and J. Bunyan, *Vet. Rec.* **64**, No. 44. November 1st, 1952) at the end of the fourth line of paragraph (1) of the summary on page 650, *for* "8 mg." (milligrammes) *read* "8 g." (grammes) (procaine penicillin per ton of food consumed).

For "North Wales Veterinary Association" *read* "South Wales Veterinary Association" in divisional report heading, *Vet. Rec.* suppl. November 1st, 1952, col. 1, p. 164.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

"WARFARIN" POISONING IN THE DOG

Sir,—I should like to report a case of fatal "Warfarin" poisoning in a dog. "Warfarin"—I do not know whether this is a trade name—is a rat poison which is said to have anti-coagulant properties and cause internal haemorrhage.

The subject was a six-months-old Boxer bitch. The symptoms were those of internal haemorrhage, *viz.*: pallor of the mucous membranes, loss of body temperature, increased respiratory and pulse rates and collapse. There was also evidence of abdominal pain. As far as can be ascertained, death occurred 12 to 17 hours after ingestion.

I should be grateful for any information on the substance "Warfarin" and suggestions as to treatment from members who may have encountered such cases.—Yours faithfully, W. M. Taylor, Crawley, Sussex. *October 27th*, 1592.

* * * * *

INCIDENCE OF "GUT-TIE"

Sir,—I was very interested in Mr. Nisbet's letter regarding "gut-tie" in your issue of October 25th, as during a few year's practice I too have met with one case. The animal was a year-old bullock that had been castrated by the use of wooden clamps clasped tightly around the spermatic cord which was severed by a heavy blow with a hammer on the upper clamp which is bevelled on the top edge, the operation being done in the cast position. After a fortnight the animal developed severe abdominal pains, marked straining in the acts of urination and defaecation, which resulted in severe constipation: the inguinal region on the right side appeared tender and evinced pain on manipulation and the animal showed a marked preference to move backwards against hard obstacles.

A complete recovery followed a laparotomy, when the spermatic cord was found to be adhering to the abdominal floor, and a small portion of intestine strangled between the abdominal wall and the cord.—Yours faithfully, Saeed Asghar, c/o Royal Veterinary College, Streatley, Berks. *October 28th*, 1952.

* * * * *

AN EFFECTIVE "PLANTAR BLOCK"

Sir,—I think it worth recording that recently at 9 a.m. I examined a hunter which was decidedly lame and found it necessary to perform a "plantar block," using Xylotox, for diagnosis. Following discussion with the owner it was decided to pin fire with the electric cautery. I did not have my equipment with me and arranged to operate in the evening. At 7 p.m. when the horse was led out of his horsebox he was still going sound and I performed the operation without further anaesthesia and with complete lack of sensation.—Yours faithfully, G. Warnock Begg, The Lower House, Wickham, Fareham, Hants. *October 27th*, 1952.

* * * * *

ARTIFICIAL INSEMINATION IN THE BITCH

Sir,—In the first paragraph of his communication to you on artificial insemination in the bitch, which appeared in the issue of October 11th, Mr. Kirk says "I do not think artificial insemination is practised in the bitch to any extent." For Mr. Kirk's information I was associated with a Mr. J. Jones, now at Cudworth, Staffs, who, in 1946 or 1947, in conjunction with some research work undertaken by Dr. Amoroso, inseminated quite a considerable number of bitches, with a high percentage of conception. I am not prepared to give exact figures, as I was not intimately connected with the work. However, I was sufficiently aware of what was going on to be able to pick up some useful background knowledge which could be used as the occasion demanded, and having such knowledge, I would never regard a successful insemination of a bitch as a seven days wonder. No doubt if Mr. Kirk cares to refer to Dr. Amoroso and Mr. Jones he will get very full information from them, and perhaps keep abreast with the times.

I should think that any competent veterinarian would always regard artificial insemination in a bitch as a working possibility, and, with a little common sense as to the technique employed, I have no doubt that the average veterinarian could achieve quite a successful result.—Yours faithfully, A. McGuinness, Glenmore House, Minehead, Somerset. *October 24th*, 1952.

ADVERTISER'S ANNOUNCEMENT

Ward, Blenkinsop & Co., Ltd.

In the advertisement "New Penotrane Solution 0·1 % for bovine metritis," on page ii of your last issue, an error was made in the copy supplied to you and not noticed at the proof stage—*i.e.*, under the sub-heading PACKING: "Solution 0·1 %: Bottles of 16 and 18 fl. oz." should have read "... 16 and 80 fl. oz."